Clinical Lectures
ON
SOME POINTS IN THE DIAGNOSIS OF SPINAL SCLEROSIS.

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LECTURE I.

TWO cases are under observation, which differ in their nature, but combine to illustrate incidentally certain points in the diagnosis of posterior sclerosis (progressive locomotor ataxia). They have a special interest in connexion with the diagnostic symptom which we owe to Westphal, and which may be thus described. If a healthy man sits with one knee-joint resting upon the other (the very common attitude), and the ligamentum patellæ of the supported leg be smartly struck just below the knee-cap with the side of the hand, a sudden contraction takes place of the quadriceps femoris muscle (of which the ligamentum patellæ represents the tendon), and the foot is consequently jerked upwards in a degree which varies in different individuals. Now in confirmed examples of locomotor ataxia this reaction does not take place. No matter on what part of the ligament below the knee-cap, or with what force the blow is struck, the foot hangs motionless. In order to establish with accuracy the absence of the phenomenon certain precautions ought to be taken. The leg should be bare; the patient must not offer voluntary resistance to the movement of his leg, and the ligament should be struck with some hard implement which can be swung like a hammer. I find an ordinary wooden stethoscope answer very well if it is held loosely by the small end, and the blow given with the edge of the ear-piece. But, however administered, several blows should be struck on the ligament, slightly changing the position each time, as there is generally one spot from which the reaction is peculiarly energetic. This is usually a little below, but very near to, the patella. Deferring for after-consideration any attempt to explain the phenomenon,

I will describe how we found the test of importance in the diagnosis of a case now in the hospital. Careful and complete notes of the two patients referred to have been taken by Mr. A. E. Broster, from whose account I will, however, only glean sufficient to illustrate the character of the affection from which each is suffering.

M——, a hairdresser, aged fifty, has been in the hospital since April. He complains of numbness, which is spread generally over the whole of his body and extremities, including his mouth and tongue. A day never passes without pains "like electricity," as he says, occurring in his left side and lower extremities, especially in the shins. There are, besides, sensory troubles of various kinds, burning sensations, aching of epigastrium, "cold water running down the legs," a feeling of tightness over the lower part of the belly as if his intestines were pushed out against the abdominal wall; this tightness is greatest when he stands up to walk, and it then seems to him to "force his motions and urine." There is great loss of muscular sense in the arms and legs. In picking up a pencil from the table with his eyes open much irregular movement is shown, no matter which arm is employed; and when his eyes are shut, and his hands placed upon the object, he clutches it repeatedly, but is unable to take it up, and says that he cannot feel it. The soles of his feet are so anæsthetic that he feels neither the carpet, the strongest faradaic currents, nor the prick of a pin; and this condition is observed, though to a much less extent, over the body generally, the deficiency, however, being but slightly, if at all, marked in the face. There is occasional diplopia. The right optic disc is atrophied, the left unduly pale. In sitting, if his eyes are closed, he tends to sway about on his seat. In rising from a chair he is obliged to help himself up by resting his hands upon his thighs, and even with his eyes open he cannot stand steadily. When they are shut, however, he reels and pitches, so that he would fall helplessly if not caught. His gait is extremely ataxic, the steps short, the legs far apart, and kept stiff at the knee-joints. The muscular power is very considerable. His sphincters are but slightly under control. I have said enough probably to show that this is a case of sclerosis of the posterior columns. There is, indeed, no symptom wanting to form the picture of a typical case of locomotor ataxia, which the history (omitted for the sake of brevity) shows to be progressive in character. Not only are there the electric-shock-like pains and the difficulty of gait intensified by closing the eyes, but there are also the cephalic symptoms in the form of atrophy of the optic disc, and occasional diplopia. I insist rather upon these latter symptoms, because, as regards the former (pains and gait disturbed by closure of the eye) they are liable to exist alone, and, if not very carefully examined, to lead to error. Indeed, in the case which follows an erroneous diagnosis was actually made from a superficial examination having caused undue prominence to be given to these symptoms.

The patient B——, aged forty-three, came to me at the hospital last December on account of "paralysis." He walked very unsteadily with his legs wide apart, and could scarcely walk at all with his eyes closed. He stood upright with difficulty and uncertainty, and the effect of closing his eyes in increasing his insecurity was very marked. There was considerable loss of sensibility in the soles of his feet and legs, a sensation of a tight band around his waist, and a constant feeling of weight in his belly. He complained, too, of pains in his legs, and said that sometimes when walking sudden pains would shoot through his knee-joints, and nearly throw him down. In the pressure of work, the case, from these data, was hastily assumed to be one of posterior sclerosis, and a note to that effect was recorded on the patient's paper. It was not till some little time afterwards that the diagnosis was amended, and it is to the circumstances under which the correction was made that I wish to draw particular attention. Looking to the brief notes of the case we found that they contained no reference to the condition of the ligamentum patellæ as regards response to blows, and it was thought well to compare the two patients, M—— and B——, who were supposed to be suffering from the same disease. On the same occasion both these men were tested in the following manner: The patient being seated, and his legs having been bared, the ham of one was made to rest easily upon the knee of its fellow. The ligamentum patellæ was then smartly struck at several points near to the knee-cap with the ear-piece of a stethoscope. In the case of M—— there was no response, at whatever part the ligament was struck—

the foot never moved; and this failure occurred equally when the opposite leg was submitted to a similar examination. When B——, on the other hand, was tested in a like manner, a comparatively slight tap on the ligamentum patellæ—a more gentle blow, indeed, than is ordinarily required in health—caused the foot to be jerked some four or five inches upwards. A similar effect was produced when the other leg was tested. The result caused surprise and interest, as it was to all appearance a startling exception to that we had got to look upon as the rule—viz., that in confirmed cases of locomotor ataxia a blow on the ligamentum patellæ causes no jerk upwards of the foot. Amongst the cases of confirmed locomotor ataxia in which I had applied the procedure, I had not found one in which examination tended to disprove the correctness of Westphal's observation. The result in the present instance, therefore, of course led us to inquire into the patient's symptoms with more accuracy than had yet been done, and this is what we found. B——'s illness had commenced suddenly four years previously. He had gone to bed quite well, and when he got up next morning he felt as if his feet were asleep, and was unable to feel the ground. The numbness crept up his legs and trunk, reaching to the navel in the course of a month, and his walking power failed. A few months later pains began in his legs, but these he described, when closely questioned, as *dull*, *heavy*, and *incessant*. The pains in the knee-joint already described had occurred a few times nearly a year ago, but only when he was walking. There was aching pain, too, in the left arm, which was somewhat wasted, and had lost power. The power of his legs was so much diminished that, as he sat and endeavoured to lift either knee, pressure with one finger of the observer sufficed to prevent any upward movement. He was liable to jumpings of his legs when in bed. The bladder was completely paralysed. Tickling the soles of his feet caused a feeling of shocks running up the legs, and there were exaggerated reflex contractions. But here we may stop. In order to make a diagnosis of the cause of this man's paralysis we should need to go at still greater length into the history and symptoms, and the study would be wide of our present purpose. It is only necessary to say that his symptoms point to an affection of the cord which is not posterior sclerosis. The case is not one of progressive locomotor ataxia, and the preservation in this instance of that which Westphal calls the "leg phenomenon" is therefore in no respect to be taken as an exception to what has been found to be the rule.

It need not be said that this test, to be valuable, must be shown to be constant in its results. If we were to find in one case of well-marked posterior sclerosis the leg phenomenon retained, the value of the suggestion would immediately sink considerably. Up to the present time I have heard of no such exception having been discovered. In 1875 Professor Westphal wrote:[1] "The leg phenomenon was constantly absent in all the undoubted cases of tabes dorsalis submitted to trial." An extended experience of three years now enables him to confirm his report, and in a paper published last January he advances a stage further, and raises the interesting question whether *before* the development of the characteristic symptoms of tabes dorsalis the leg phenomenon is wanting, and whether, therefore, the fact of this reaction being absent can be utilised thus early as a diagnostic sign. He has seen, he says, cases in which there were the characteristic pains without ataxy or any sensory troubles, but with commencing atrophy of the optic disc, and in these the leg phenomenon was absent.

A case has been recorded by me[2] in which lightning pains of a very characteristic kind, and continued during many years, were accompanied by atrophy of the optic discs, but were not associated with any ataxy or anæsthesia. In this case the leg phenomenon was "conspicuous by its absence." I have had under occasional observation for some years a gentleman arduously engaged in his profession, who suffers from time to time paroxysmal attacks of shooting pains, which he attributes to gout, but which have all the characters of those belonging to posterior sclerosis. His gait is quite unaffected, there are no symptoms referable to the cerebral nerves, and the only deviation from health, besides the pains, of which he is conscious (and this is trifling, although significant enough), is a tendency to imperfect action of his sphincters, if the opportunity of obtaining relief is long delayed. In this case careful percussion (the skin being bare) failed to produce any evidence of patellar tendon reflex. I have lately been consulted by a gentleman on account of pains, which had been in his case likewise attributed to gout, but which were characteristically "lightning-like" in character. This person not only exhibits no sign of muscular inco-ordination, but his delight is in mountain-climbing. He presents, indeed, none of the symptoms ordinarily attributable to posterior sclerosis, except the tell-tale pains. In his case, again, examination shows a total absence of Westphal's leg phenomenon. This is the only example I have at present met with of the test being applied where the indications of tabes dorsalis were absolutely limited to the occurrence of pains. In another case under my observation, in the person of a gentleman over seventy years of age, the pains are precisely of similar character; the gait is, besides, somewhat ataxic. Here equally it is to be noted there is no response to blows upon the patellar tendon.

Two questions naturally arise. What is the cause of the leg phenomenon? Why is it absent in posterior sclerosis? I do not think we are as yet in a position to give a positive answer to either, and the subject is still under investigation. One's first idea is that the contraction of the muscle must be brought about by a reflex from the skin at the part which is struck. But Westphal has practically disposed of this explanation. He pinched and pricked and irritated the integument in various ways without effect, even submitting a fold of the skin, lifted away from the tendon, to smart blows with a hammer. On the other hand, when the skin lying over the ligamentum patellæ was frozen by Richardson's process the effect of blows upon this spot in determining the contraction was in no way lessened. So, also, in cases (not being examples of locomotor ataxia) where there was complete cutaneous anæsthesia, the "phenomenon" has been found present. The influence of the skin must therefore be excluded.

The researches of Westphal, supplemented and carried a stage further by some interesting experiments recently conducted by Tschirjew, of St. Petersburg, appear to render it probable that the phenomenon is of partly mechanical and partly reflex origin. Tschirjew found[3] that section of the cord in guinea-pigs above the place of entrance of the sixth lumbar nerve roots caused the phenomenon to disappear. In addition to this, he discovered that when the posterior root of one of the sixth lumbar nerves was divided the phenomenon failed on the corresponding side. If these experiments were free from fallacy, the reflex character would seem to be placed beyond doubt. It would appear, indeed, probable that the blow upon the patellar tendon, by suddenly stretching it, irritates some nervous fibres belonging to the tendon, the impression thus produced being conveyed to the cord, and there exciting the motor nerves to the muscles. Degeneration of the cord at the point where the nerves enter may easily be supposed to be capable of interfering with the orderly reflex which thus occurs in health, and in this way the effect of posterior sclerosis in preventing the exhibition of patellar tendon reflex may possibly be explained. The very rare circumstance of the lumbar portion of the cord escaping the degenerative changes, in tabes dorsalis, would thus sufficiently account for the certainty with which, apparently, this diagnostic sign may be looked for.

[1] Archiv für Psychiatrie. Berlin, 1875. [2] Brain, July, 1878. [3] Berl. Klin. Wochensch., April 29th, 1878.

NOISES IN THE HEAD; THEIR ETIOLOGY, DIAGNOSIS, AND TREATMENT.

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(Continued from vol. i. 1878, p. 196.)

WE have next to consider that group of noises which have a singing or buzzing character, and which are more or less constant in their duration. They often coexist with the intermittent gurgling noises already examined, and even sometimes with the pulsating sounds of a rhythmical nature; in fact, all these classes of noises may be present, either at one and the same time, or at different periods in the progress of the same case.

As already intimated, the hypothesis which it is the object of this paper to establish is based on the principle that for *every noise experienced by the patient there exists a definite*

objective cause. The factors which are mainly instrumental in the production of the class of sounds now under review may be referred either to contraction of the intrinsic muscles of the ear, or to the rushing of an increased flow of blood through the relaxed and dilated vessels of the cavity of the tympanum. Both these causes may co-operate in producing the symptoms of which the patient complains, because the congestion of the middle ear obtaining in the latter state is calculated to irritate the muscles, and excite them to spasmodic action. At the same time the contraction thus induced will aggravate the original disturbance of the circulation. So that these two abnormal conditions of the middle ear, by reacting on each other, tend to perpetuate the disease; and, constituting as they do a large part of the morbid phenomena of chronic non-suppurative inflammation of the middle ear, it is not difficult to understand why this particular form of ear disease comes to be the *bête noir* of the aurist.

First we will examine the sounds resulting from muscular contraction. If a person lying with the side of his head on a pillow tightly clenches the jaws, a sound is heard which closely resembles that produced by holding a shell near the ear. It is due to the contraction of the muscles which close the jaws, and is said to be of universal occurrence whenever a muscle contracts strongly, but which is audible to the experimenter in this case owing to the proximity of the contracting muscles to the auditory apparatus. Hence it will be apparent that if the sound in question can be heard when situated without the ear, the inordinate contraction of muscles situated actually within the hearing apparatus must be even more audible. That the ordinary contractions of the tensor tympani and stapedius are not thus appreciated is within the experience of every person possessing healthy ears. It requires an inordinate or spasmodic contraction due to some irritation of the muscle from coexisting disease or of its nerve for the production of such a vibration of their fibres as would constitute an audible note. The possibility of its occurrence was first suggested by Laennec, but the recognition of the points by which its presence may be diagnosed are of quite recent date, and require attentive study. They have been carefully investigated by various continental authorities, foremost among whom are Weber, Liel, and Grüber. The latter was the first to point out that the tendon of the tensor tympani is inserted into the anterior surface of the handle of the malleus, as well as into its inner angle. This fact has an important bearing on the position which the manubrium will assume when subjected to the strain of the muscle which acts upon it. Under these circumstances, the bone will undergo a kind of semi-rotation on its transverse axis, the effect of which is that while the distal end of the manubrium is directed inwards, the upper end of the malleus bulges against the membrane, throwing the two plicæ semilunares into marked prominence, at the same time the processus brevis is brought into view; while the upper part of the manubrium stands out boldly in relief, its distal end retreats towards the inner surface of the tympanic cavity, so that when observed from the meatus the process is seen fore-shortened. The anterior segment of the membrane is greatly retracted, appearing to fall away from the plane of the rest of the membrane in the direction of the cavity of the tympanum. The point, however, which the writer regards as pathognomonic of the condition in question, especially in extreme cases, is one not, as far as he knows, previously mentioned. It consists in the displacement of the manubrium from its obliquely vertical position into a more or less horizontal one, so that it comes to lie parallel with, and almost close to, the margin of the posterior plica semilunaris. The assumption of such a position as the result of muscular action becomes intelligible in view of the direction taken by the tendon of the muscle in passing to the insertion noted by Grüber.

In attempting to differentiate this particular condition we must not lose sight of the fact that cicatricial contractions and adhesions are frequent sources of displacement of the position of the manubrium mallei. When, however, it is due to muscular action, the entire membrane is usually mobile, and is more or less capable of restoration to its normal plane by inflation through the Eustachian tubes.

While writing these lines I have had under inspection a patient whose membrana tympani is so completely retracted that it rests upon the promontory which is distinctly seen through it, yet he hears no noises. In this case the manubrium retains its normal, obliquely vertical direction, its distal end being simply drawn inwards by the retracted membrane. But where the retraction is due to muscular action the characteristics already noted will be apparent. Where, then, the tidal noise exists, and, associated with it, the membrana tympani presents the foregoing appearance, we may safely postulate a condition of spasm in the muscle in question. And it is exactly in these instances that the simple proceeding of exhausting the air of the meatus with a pneumatic speculum by pulling upon the extensor muscle, and so reducing the spasm, temporarily relieves the tinnitus dependent upon it. The reduction of spasm by extension of the contracted muscle will suggest many analogies in surgical practice.

It is important to notice here that most writers attribute the cessation of the noises occasioned by the use of the pneumatic speculum under these circumstances to the fact that pressure is thus taken off the endo-lymph which the retraction of the membrane is supposed to imply. But the whole of the argument of this paper is against such pressure being a *vera causâ* of tinnitus. Were it otherwise—that is to say, if retraction of the drum-head constitutes pressure on the endo-lymph, and such pressure necessitates the production of a subjective noise, surely no instance could better exemplify these conditions than the one above quoted. Yet though here the collapse was complete, there were no sounds. Such cases of retraction, without spasm of the tensor tympani, indeed, are of daily occurrence; they result for the most part from closure of the Eustachian tube, in which cases tinnitus is not necessarily present, and if it does exist, it is from some other cause than compression of the inter-labyrinthine fluid. Such pressure may cause giddiness and tendency to fall—phenomena which coexist with deafness; but any concurrent sounds acknowledge a totally different and, as already insisted upon, a distinctly *objective* origin; that is to say, for a sound to be heard a sound must exist.

Under this head, also, come a number of instances where very small foreign bodies get on to the membrane of the drum, and indicate their presence mainly by the disproportionately severe tinnitus to which they give rise. The following is a case in point: An iron-moulder had several small black patches, consisting of foundry dust and secretion, adherent to the drum-head, with concomitant noises of the most distressing character, all of which disappeared with the removal of the offending matter. Instances are not rare in which one of the stiff hairs usually found about the orifice of the meatus gets lodged upon the membrane with a like result as regards the production of tinnitus. Then there is the case of the classical louse, whose peripatetic wanderings over the drum-head were accompanied with as much noise to the sufferer as if he were standing close to the monster drum at a popular concert. Now it is important to bear in mind that in these cases tinnitus, though a marked symptom, is not the only one, there being usually a strong sense of horror pervading the patient, and at the same time so much giddiness that occasionally he is compelled to fall to the ground. These points are graphically illustrated in an instance related by Wylde. He states—"I remember being, out shooting in a plantation many years ago with a friend who, suddenly exclaiming 'Oh! an earwig,' and throwing aside his gun, fell on the ground, making the most piteous moans, and rolling about in convulsive agony. Finding that some small insect had got into his ear, I procured some water from a neighbouring ditch, and poured it into his meatus, and as I watched for the result, a little animal, well known among anglers as the hawthorn fly, crept out, and the gentleman was immediately relieved." These associated symptoms are of paramount importance, as they indicate the true cause of the phenomena, which is as follows: The membrana tympani and inner part of the meatus are exquisitely sensitive, a circumstance which is due to their being richly endowed with nerves from the auriculo-temporal of the fifth. This nerve, it will be remembered, supplies an offset to the otic ganglion, and this ganglion supplies the nerve to the tensor tympani, or rather, as I should prefer to describe it, the branch of the auriculo-temporal destined for the tensor tympani passes through the otic ganglion on its way to the muscle. Now it is a trite physiological axiom that when the peripheral distribution of a sensitive nerve is irritated reflex spasm is excited in the muscles supplied by the same nerve. It is quite clear that such a set of phenomena are established when the drum-head is tickled; in con-

sequence the tensor tympani becomes spasmodically convulsed, the vibrations of its fibres causing the sounds of which the patient complains, while the retraction of the ossicles upon the membrane of the vestibule (foramen ovale) which accompanies this action produces such disturbance of the equilibrating apparatus constituted by the semicircular canals, that the patient not only becomes giddy, but has a strong tendency to topple over. It may still, perhaps, be regarded as a moot question, whether, when every other factor is eliminated, pressure on the interlabyrinthine fluid is ever, *per se*, capable of giving rise to sounds which in such a case might fairly be called subjective. In discussing the etiology of pulsating tinnitus we saw how a surcharged state of the arterioles of the labyrinth communicated their throb to the contiguous nerves of audition, and so gave rise to the symptom. It is possible that pressure exerted from without upon the endo-lymph by crowding the delicate elements, including the capillaries, of the perceptive apparatus of the cochlea upon each other may be attended with similar results, because compression of the vessels, by increasing the resistance to the passage of blood through them, would occasion the rushing noise complained of where such pressure exists. Even then the symptom must be regarded as an objective one. This is, doubtless, the condition which exists in Menière's disease, due to pressure upon the fluid contents of the labyrinth by morbid processes going on in the tympanic cavity. The noises heard under these circumstances cannot be compared to the luminous images produced by pressure on the globe of the eye, and known as *phosphenes*, and which are seen as long as the pressure is kept up. These appearances may possibly be regarded as subjective phenomena, because the luminous effect thus occasioned has no actual existence outside the state of the optic nerve or the retina induced by the pressure. But we cannot accept such an explanation as applicable to any considerable proportion of cases of tinnitus, because of the persistency of the sounds which often extend over many years; for it is difficult to imagine that sufficient pressure could be exerted to give rise to the tinnitus without producing speedy disorganisation of the auditory nerve. This means absolute deafness, and is the usual course of events in Menière's disease. It bodes ominously for the patient.

We call attention to these points before proceeding to the next group of noises in order to insist on the importance of an early diagnosis of the causes of tinnitus, and the issues towards which they tend. The cases already dealt with are for the most part amenable to treatment. The hyperæmic conditions of the middle ear about to be considered are doubtless more difficult to deal with, but the necessity for treating them becomes more urgent in proportion as we recognise their tendency to pass into the proliferating and disorganising processes to which reference has just been made. For it will be an advantage to arrest the progress of the disease, even though the mischief already accomplished cannot be undone. The triumph of the aurist in this event may not be very striking, but it is not the less a substantial gain for his patient. Syphilitic affections of the middle and internal ear are practically undistinguishable from the foregoing, except by such light as their history may afford.

These preliminary observations introduce us to the last group of sounds recognised in the foregoing classification (p. 194, vol. i.) It includes by far the largest number of cases of tinnitus. The ordinary noises in the ears met with in nearly every instance of acute mischief in these organs, and in a large proportion of the chronic ones, belong to this group. Such of them as are not explained in the preceding paragraphs are *referable to hyperæmic conditions of the vessels of the meatus, middle ear, or Eustachian tube*, or of all these regions combined.

It is necessary at this point to recall the following anatomical relations of the blood-supply of the regions involved in our inquiry. For the purposes of this paper it will be sufficient to state that the vessels of the meatus, membrana tympani, and middle ear are continuous to a considerable extent *from the outer side* through the stylo-mastoid branch of the posterior auricular artery; while the Eustachian tube receives its blood from the ascending pharyngeal and inferior palatine arteries, branches of which it transmits along its course to the cavity of the tympanum. The point we wish to emphasise as bearing on the origin of these noises is that the cavity of the drum is furnished with bloodvessels *continuous on the one hand with the external meatus, and on the other with the Eustachian tube.*

Perhaps the simplest form of the kind of tinnitus now under review occurs when cerumen has accumulated for a long time in the meatus. It is then almost always associated with ringing noises, which Kramer attributes to pressure on the chorda tympani as it crosses the drum-head. Though Kramer attempts no further explanation of the *modus operandi* of this cause, it could only become operative on the supposition of a transference of the irritation from the chorda tympani to another branch of the seventh nerve—namely, that supplying the stapedius muscle, the violent contractions of which, consequent thereon, give rise to the symptom complained of. One objection to this view is that giddiness commonly accompanies an accumulation of cerumen, which the action of the stapædius would antagonise, for, being a *laxator* tympani, its contraction would prevent pressure on the labyrinth. It is therefore more probable that spasm of the *tensor* tympani is responsible for some of the noise audible under the circumstances, and this would be excited reflexly through irritation by the ceruminous mass of the sensitive branches of the fifth nerve, distributed to the drum-head, as already described. This latter view accounts also for the attendant giddiness, as it causes pressure directly on the labyrinth.

The true element in the permanent causation of the sounds becomes evident when the obstruction is removed from the canal. If it and the membrane be then subjected to searching examination, some part will invariably be found injected; and from what has been said of the continuity of vascular supply on either side the drum-head, it is quite certain the congestion extends also into the tympanic cavity. The explanation offered is that this capillary congestion produces a *wave-like murmur*, and this occurring within the auditory apparatus is appreciated as such by it. The various forms of mycelium, pencillium, aspergillus, and other fungi, which occasionally make their habitat in the external meatus, are also accompanied by these noises. But when the cavity is cleared it will invariably be found in a hyperæmic condition, so that the same explanation of the tinnitus holds good in these instances as in that of inspissated cerumen.

Confirmative evidence of this view of the *hyperæmic origin* of certain noises is afforded by a case related by Troltsch, in which the irritant was seated at the opposite end of the auditory passage—viz., at the mouth of the Eustachian tube. The patient in this case complained for years of a continuous sound in one ear, and of a sensation in the pharynx as if a hair had got into his mouth. After the man's death, a grain of barley was discovered projecting from the pharyngeal orifice of the tube, and extending into the osseous portion.

In this instance of a foreign body impacted in the *inner orifice* causing tinnitus, we have the counterpart of the same condition at the *outer orifice* producing this symptom. As we have seen, a corresponding continuity of blood-supply exists between either passage and the tympanic cavity. In the former, therefore, as in the latter, the presence of an irritant gives rise to an increased flow of blood to the middle ear, the rush of which is in either case appreciated by the auditory nerve as a murmur. At the same time it may well be granted that the presence of a foreign body in the Eustachian tube—close, therefore, to the situation of the tensor-tympani muscle—may occasion its contraction, and thus introduce a duplex element into the causation of those sounds which acknowledge a Eustachian origin.

We are now in a position to understand how it happens that in the large and tedious class of cases of deafness included under the head of chronic non-suppurative inflammation of the middle ear, which for the most part have a pharyngeal origin, we so invariably meet with tinnitus, respecting the cause of which inspection affords no objective clue. It is in these instances that the best directed endeavours of the aurist to relieve the sounds prove so frequently abortive; it is in these also that patients so pathetically implore us "to do something for their noises; not to mind about deafness—they have given that up long ago."

That these cases are not, however, quite hopeless the writer's experience has amply shown, considerable benefit having followed the use of remedies directed to subdue the hyperæmic cause of the tinnitus. It is necessary to remember that many conditions dependent upon the congestion are superadded to it, and must be treated accordingly; while the confined space in which the morbid processes take place, and the difficulty of gaining access to them, are further obstacles to the treatment.

(To be continued.)

ON PUERPERAL SEPTICÆMIA;

AND ITS RELATIONS, IF ANY, WITH THE POISONS OF THE SPECIFIC ZYMOTIC DISEASES—MEASLES, SCARLET FEVER, SMALL-POX, ETC.

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(Concluded from page 81.)

Now let us contrast the symptoms of genuine puerperal septicæmia with those of the specific contagious diseases when they affect a parturient woman. In the former case rigors are seldom present at the first, at least to any extent. The temperature may run high, but the breathing is not hurried. The skin preserves its colour, or else assumes an ashen whiteness. The head remains clear and painless, and there is an absence of all alarm with respect to the issue of her illness. The milk and the lochia are suppressed after some days, but much more slowly than in the case of the specific diseases. Whilst cases of these latter nearly always run on to coma and death in two or three days, the sufferer from true septicæmia may linger on for days, and even for weeks, dying at length from ulterior changes in the blood and nervous system.

A few words upon the nature and action of this septic process, which, introduced into an open wound, may produce pyæmia, or, into the uterine sinuses of a parturient woman, septicæmia; but which, both in its mode of origin and in the effects which it produces, is totally distinct, in my opinion, from that caused by the poison germs of any of the specific diseases. "It is easy," says Dr. Sanderson,[1] "to prepare a putrid infusion of muscle possessing such toxic properties that *less than half a grain* of it introduced into the blood of a dog will produce death." So, also, "a single drop of the exudative fluid of some inflammatory disorders of the serous membranes will equally kill if injected into the veins or under the skin of an animal." Now, I take it as proved that it is the growth of bacteria in these fluids which makes them so deadly. And not alone the *growth* of bacteria, for they by themselves are harmless enough, since they enter the blood continually in thousands without producing any ill effects; but the bacteria, when planted in a suitable medium, such as decomposed blood or the products of inflammation, produce the septic poison, it may be by fermentation, it may be by secretion; and thus, although bacteria are of themselves innocent, there can be no septicæmia where they are not or have not lately been present. And these are the symptoms to which the injection of such septic matters gives rise: shivering or shuddering; restlessness, muscular debility, and unsteadiness of gait; then vomiting, purging, tenesmus, and alvine irritation. There is also some rise of temperature at first. If the dose has been sufficient—*for everything depends upon the quantity of the septic poison which has been introduced*—death speedily follows these symptoms. The post-mortem appearances in such cases are (quoting from Dr. Sanderson): "Blood extravasated underneath the pericardium, sometimes in the neighbourhood of the valves, and chiefly on the left side. The pericardial and pleural surfaces are ecchymosed. The mucous membranes of the stomach and intestines are invariably found of a red colour, from the detachment of epithelium; the spleen is enlarged, and the abdominal organs generally are in a state of congestion. Now, the essence of all this is capillary congestion and hæmorrhage of the abdominal viscera generally, leading to blood stasis and shedding of epithelium. Microscopically, the blood-globules are found dissolved in the serum, the colourless corpuscles being also disintegrated."

Now the phenomena just enumerated, whether of the symptoms during life or of the appearances after death, very nearly resemble those which are met with in surgical septicæmia; and those of puerperal septicæmia are essentially the same. As Dr. Sanderson says, "considering that the anatomical conditions present in the puerperal state are in themselves so favourable to the entrance of septic matter, we should expect to find in obstetric practice cases more comparable with experimental septicæmia than in surgery. Puerperal septicæmia must therefore be regarded not so much as a disease as a complication, differing from pyæmia not only in the fact that it has not necessarily a connexion, although generally it has, with any local morbid process, either primary or secondary, but also in the important particular that it has no development. Pyæmia is a malignant process which goes on to its fatal end; but in the case of septicæmia, inasmuch as the poison which produces it has no tendency to multiply in the organism, there is no reason why the morbid process should not come to an end of itself, unless either the original dose be fatal, or a *second* infection from the same or from another source take place."

It would appear, then, that bacteria, which are everywhere present, require a suitable *nidus* in which to operate in order to produce their septic effects. That *nidus* is presented by any wound or open part of the body which contains unhealthy secretions or disintegrated blood or tissue. The open uterine sinuses, the abraded mucous membranes of the vagina or vulva, of women, after delivery, present the situation of all others most favourable for these septic operations, provided there be blood or secretions of an unhealthy character to be operated upon, *and a state of the system which is ready to be easily affected by the process.* For it has been proved experimentally—first, that broken-up blood-globules, introduced into the circulation of a dog, produce all the phenomena and fatal effects of septicæmia immediately; secondly, that if you allow blood to coagulate and then strain the serum off the clot, this serum, injected into the veins, also acts as a poison; the source of mischief in this latter case being the disintegrated leucocytes or white corpuscles of the blood.

It follows as a matter of absolute necessity, in view of these facts, that all clots, altered serum, or secretions should be most assiduously washed away from the uterus and passages of a parturient woman, whenever we have reason to fear that this infective process is being set up. We must act upon the hope that, although *some* poison may have entered the circulation, that portion may not be sufficient to kill the patient. To remove from her person any more of it that may be lying ready for absorption must be the first object; whilst, at the same time, we may try to counteract the effects upon her system of that which has already been absorbed. That poison, as I have said, may be lurking in the vagina, or in the uterus itself; therefore, to be effectual, syringing must be carried right up to the uterine sinuses. This, in such cases, should be done almost hourly, so as to anticipate, if possible, the absorption of more septic matter. No hand but that of the accoucheur can do this effectually; and no man can feel comfortable who, seeing septic infection going on, does not himself grapple with all his might with so deadly an enemy.

To sum up my argument, then, I reckon that there are three ways in which a parturient woman may suffer special damage:—

1st. One of the specific zymotic diseases may attack her immediately before or after her delivery. The result will be a modified and generally a very severe or fatal form of that same disease, which will run the usual course with or without other complications. The germs of these diseases, as is well known, multiply in the system, and speedily affect the whole of it. This poison may be communicated to any number of non-parturient and healthy persons.

2nd. By the introduction of a septic poison from without, as from the atmosphere of the lying-in room, or from that of a foul neighbourhood; or it may be conveyed to the patient in the clothes or on the hands of the practitioner, the nurse, or other attendant. This septic poison cannot be that of one of the specific diseases, for we have seen that *they always breed true.* Moreover, it must be a poison containing bacteria, because without bacteria there can be no septicæmia. That it can be carried about from place to place without giving rise to any suspicion of its presence is accounted for by its extreme minuteness and tenuity.

3rd. The septic poison may be generated in the body of the parturient woman herself, on the introduction of (harmless) bacteria or other germs from without. We have seen that decomposed blood or disordered tissue or secretion forms the favourite *nidus* of bacteria to act upon, so as to produce their poison, whether in a surgical wound or in the open sinuses of a recently delivered woman. As the atmosphere, especially that of hospitals and sick-rooms, contains innumerable germs, which only require to be sown upon a suitable bed to acquire their poisonous pro-

[1] Lectures on Septicæmia.

perties, what wonder that they sometimes gain access to such a bed as the bruised uterus or vagina presents! The only wonder is that, upon this theory, not a few only, but the great majority of parturient women do not fall victims to septicæmia. The explanation is well pointed to by Dr. Sanderson. To become fruitful for mischief, these germs require unhealthy blood or tissues to act upon, or a system in a condition (unknown) ready to absorb the products of such union. Into the healthy blood and tissues bacterial germs enter in numbers continually; but as fast as they enter they are destroyed by some destructive (colytic) action of the healthy blood and tissues.

The septic poison, once generated as above described, spreads from tissue to tissue, sometimes rapidly, at other times more slowly, affecting now one, now another of them; in this respect resembling a cachexia, such as tubercle or cancer, rather than the specific poisons which multiply themselves rapidly in the system, and, after a few days, are all cast out.

The appearances after death from puerperal septicæmia have been described as strictly resembling those which have been observed after the injection of a septic poison into the blood of an animal. They are, shortly—capillary congestion of various organs, particularly of the mucous membranes of the stomach and intestines; infarction of bloodvessels in the lungs, liver, &c.; and, towards the end, evidence of embola in the brain and nervous centres; and when we remember the ease with which the disorganised blood in the uterine sinuses can enter the circulation after labour, it is difficult not to believe that in all this we have the *fons et origo* of most of the cases of puerperal septicæmia.

The symptoms, also, are those which flow naturally from some such starting-point: loss of muscular strength, so characteristic of every case of the disease; breathlessness, palpitation, quickened respiration and pulse; rise of temperature, varying but little between night and morning; then disturbance of the stomach, vomiting, diarrhœa, with a clean red tongue, from loss of the epithelium. As regards the nervous system, there is generally clearness of intellect, with complete unconsciousness of the gravity of the illness. Food is taken tolerably well for some time. Towards the end the intellect may become clouded, with total apathy to all surrounding objects.

I feel that I should have been only wasting your time were I to conclude without drawing some practical conclusions from the facts and arguments stated above. 1st. We ought, as a matter of course, to be most careful to guard an expecting parturient woman from every chance of infection from any of the specific contagious diseases, and to use the most scrupulous care to prevent ourselves from being the carriers of such infection. 2ndly. We ought at the same time to be on our guard lest the idea of this class of disease should either warp our judgment or blind us to the probable fact that the case before us is one of *true* septicæmia, and owes its origin to quite another form of poison to that of the contagious diseases—viz., to the importation of the poison generated by bacteria from some blood disease, or cachexia, in which these organisms abound. Lastly, we must take care that the atmosphere and other surroundings of the patient are kept so as to eliminate all suspicion of infection from them.

But it may be asked, How would you treat a case in which symptoms of septic poisoning have already set in? First of all, I would act upon the hope that, although some poison has been absorbed, that portion may not be sufficient to kill the patient. Remove from her person, by repeated syringing up to the uterine sinuses with disinfectants, any more of the poisonous stuff which may be lying there ready to be absorbed. Counteract as far as possible the effects of that which has been already absorbed, mainly by supporting the strength of the patient by mild nourishing food and *moderate* stimulants.

Then as to disinfectants. What a farce does it not seem to us to see nurses and attendants placing a little Condy's fluid in saucers about the room of a woman lying ill of puerperal septicæmia! The disinfectants are wanted in the vagina and uterus—even in the blood itself; and all other modes of using them are but a delusion and a snare, which may result in the most fatal consequences. The great desideratum undoubtedly is some substance which, introduced into the patient's blood, would kill the poisonous germs without also killing the blood itself. Such a substance is not yet known, but there is no reason, theoretically speaking, why it may not be discovered. Salicylic acid, or the new disinfectants thymol and carvol, should have a fair trial; and we may hope that some other germicide may be discovered which, whilst tolerated by the blood, may be destructive of the poison in it. Meantime, as I set out with observing, until the happy discovery of some such *curative*, we must pay all the more attention to *prevention*; and I feel assured that in the acceptance of the theory of septic poisoning which I have endeavoured to illustrate from the experiments of the best observers you will find a rational course of action; whilst, at the same time, your responsibility will be enormously increased if you neglect to take the most minute precautions against so terrible a malady.

CASE OF CHRONIC ANÆMIA RESULTING FROM GASTRIC HÆMORRHAGE, SUCCESSFULLY TREATED BY TRANSFUSION OF BLOOD.

BY PATRICK LETTERS, M.B., C.M.

MRS. M'A——, aged sixty, had enjoyed uniformly good health until about two years and a half ago, and previous to that time her physical condition had always been robust. A few weeks prior to Christmas, 1875, she received a sudden mental shock, to which she attributes her subsequent illness. This was followed the same evening by a rigor, and next morning by the vomiting of a large quantity of blood. For more than six months from this occurrence she did not leave bed, her daily symptoms being pain at the centre of the epigastrium, aggravated by pressure and the swallowing of food, vomiting, heartburn, and constipation. The hæmatemesis recurred as frequently as every second or third day, leaving the patient emaciated and anæmic. About May, 1876, the hæmatemesis ceased, the pain, vomiting, and constipation continuing unabated. By slow degrees her strength became somewhat recruited, and she began to regain weight and colour. During the autumn and winter following she had so far improved as to be able to give occasional attention to business (that of shopkeeper), but she continued to suffer incessantly from the dyspeptic symptoms. During the summer of 1877 her strength had still further increased, but the vomiting and constipation were habitual. Early in October of the same year the case once more assumed a grave aspect, with every symptom intensified in severity. Deglutition was now followed by acute pain as soon as the food reached the stomach, and even liquids were instantaneously rejected. At this stage I was sent for to see her at midnight, and found her in a state of syncope consequent on the loss of a considerable quantity of blood. The hæmorrhage recurred in lesser quantities at intervals of a few days for more than a month, necessitating the administration of ice, combinations of gallic and sulphuric acids, and acetate of lead and opium. To complicate matters, a bed-sore formed over the sacrum.

Towards the end of February, 1878, the pain and vomiting, which had been continuous for two years and a half, disappeared altogether, somewhat abruptly, and simultaneously the patient suffered from a spontaneous attack of diarrhœa of about ten days' duration. For this powerful astringents had to be employed. When it was arrested the patient expressed herself as free from all pain and acidity, and as having no tendency whatever to regurgitation of food. The symptoms remaining were extreme debility, blanched lips, gums, and conjunctivæ, waxy appearance of countenance, indistinctness of vision, sleeplessness, constipation, occasional cramp in muscles of limbs and back, slight œdema of ankles, and absence of all desire for nourishment. The pulse was small, tense, and irregular, occasionally imperceptible at the wrist, and anæmic bruits could be heard over the base of the heart. The treatment pursued throughout the entire progress of the case, both dietetic and medicinal, was that usually employed in cases of gastric ulceration. From the complete subsidence of the pain and vomiting, it was evident that a sanative change had taken place in the stomach. The symptoms left were simply those indicative of the patient's wasted and exsanguineous state. To restore vital activity to the almost suspended function of nutrition was now the object of treat-

ment; and with this view tonics and hæmatinics were prescribed, commencing with the citrate of iron and ammonia, with infusion of calumba. This combination not producing any effect, the sulphate of quinine and reduced iron were tried and persevered with for a month, with very trifling results. Strong soups, milk, and port wine, were forced upon the patient; but the stomach could not be made to feel the necessity of food. As a final resource, transfusion was suggested, and consented to.

The operation was performed at 1 P.M. on April 3rd, with Dr. Roussel's apparatus. The blood was supplied by a soldier, aged twenty-six, in vigorous health. The vein selected on each party was the median cephalic, which on the blood-giver's part furnished an abundant jet. To provide more securely against any possible introduction of air and any cooling of the blood *in transitu*, I worked the apparatus under water at a temperature of 104°. The anæmic vein having been opened, and the larger cannula inserted, the transfusion was commenced and proceeded with uninterruptedly until four ounces had been transferred. At this stage, the patient (who is quite free from any chest affection, either pulmonic or cardiac) began to breathe hurriedly, and and to cough in a smothered, spasmodic manner. Fearing that the fresh blood was entering the circulation too rapidly, and thereby overtaxing the heart, I pressed the balloon at the next stroke with more caution. I had just emptied the ball, when the patient immediately complained of cramp in her loins, the pain forcing her to cry out. On account of the extreme urgency of this symptom I resolved to discontinue the operation at once. The spasm continued very violently for about fifteen minutes after the withdrawal of the cannula from the vein. It afterwards relaxed gradually, and disappeared in about five minutes more. The pulse, which during the cramp had been flickering, became regular and more full, beating about 110 per minute. The short, gasping breathing gave place to natural easy respiration, and the countenance, which had assumed during the paroxysm of pain a most anxious expression, became calm. After an interval of ten minutes the characteristic rigor appeared, and continued for half an hour. Some hot brandy-and-water, held in readiness in anticipation of this event, was immediately administered, and heat was applied to the surface. When the chilliness had subsided, the patient felt warm, perspired gently, and slept for one hour. At 7 P.M. she felt refreshed and looked animated; pulse 105.

April 4th.—Has slept three hours continuously; remarks that she has not had anything approaching that amount of sleep any night or day for many months; has felt hunger, and ventured to eat a small piece of broiled steak. Bowels have moved spontaneously; countenance less waxy. Pulse 98, compressible.

5th.—1 P.M., forty-eight hours after operation: Found patient sitting up partially dressed; decidedly improved in appearance; gums and conjunctivæ less pale, and increase of colour in lips quite discernible; waxy appearance gone; finds a wonderful improvement in her eyesight since the operation; can walk unassisted across the room; appetite improving; slept three hours; wound of arm healed. Pulse 96, with increased volume.

6th.—In consequence of some agitation the previous evening, was annoyed with flatulence, and did not sleep; nevertheless affirms that she feels stronger than yesterday, and says she is quite conscious of an almost hourly improvement in her strength; still speaks of the remarkably sudden amendment of her sight as unquestionably due to the operation; lips redder; cheeks slightly tinted; washed her face unassisted, a feat which she had not been able to accomplish for a period of six months. Pulse 96, much fuller than before operation.

7th.—Observes that her sleep is much improved since operation; prior to it did not average half an hour in twenty-four hours; now averages three hours, and last night slept for four consecutive hours; bowels operating spontaneously and naturally; appetite keen; colour similar to yesterday. Pulse 94.

8th.—Strength continues to advance; has slept four hours; has dressed herself completely unassisted; walks with comparative firmness; slight œdema of the ankles still present. Pulse 94.

10th.—Slept uninterruptedly for five hours, but did not sleep the previous evening, owing to mental agitation; walks more firmly than she has yet done; stomach and bowels working admirably; tongue clean; colour now markedly improved. Pulse 92.

12th.—Still sleeping well; gaining strength rapidly; although ordered to rest occasionally, persists in remaining out of bed for about twelve hours daily; feet still slightly œdematous; colour of lips better. Pulse 90.

From this date she advanced rapidly to recovery without an unfavourable symptom. The dyspeptic symptoms are all gone; she has no pain; sleeps and eats well. On the 15th April she ventured, on her own responsibility, out of doors, walked a considerable distance, and ascended two stairs. On the 28th (three weeks and a half after the operation) she walked three-quarters of a mile and attended church. The anæmia is quite gone, and she continues day by day to gain weight, colour, and strength.

The beneficial effects of transfusion in this case manifested themselves so immediately and unequivocally as to fully warrant the conclusion that that operation, in extreme cases of anæmia, must be found to be a most valuable remedial agent. The case further illustrates that grand results may follow the injection of an inconsiderable quantity of blood drawn from a youthful and healthy source. A few ounces of healthy blood added to the current circulating in the brain had banished the sleeplessness due to defective nervous nutrition. For a similar reason the stomach, bowels, and organs of vision were stimulated to renewed activity; and the vital functions of nutrition and repair, all but suspended everywhere throughout the organism, were revived and restored to the standard of health. The symptom which led to a suspension of the operation when four ounces had been transfused is peculiar. Cramp in the loins had been one of the symptoms prior to the operation; and, as such a symptom does not appear to have been noticed heretofore, its occurrence was probably without dependence upon the transfusion, and therefore accidental. Operating under water has not been recommended hitherto as far as I am aware. I consider it to have the following advantages:—1. The more secure and effectual exclusion of air. 2. The prevention of the slightest cooling of the blood in its passage through twenty-four inches of tubing. 3. The immediate cleansing of the apparatus with warm water before the blood has time to coagulate.

Transfusion cannot be said to have yet taken its proper place in this country as an efficacious remedy in cases of anæmia not dependent upon malignant or irremediable disease. That it must take a high place amongst the resources of the surgery of the future there can be no doubt. It does not belong to that class of remedies which can be cast aside untried, either from a disbelief in its efficacy, or from the supposed dangers that may attend its employment. Transfusion can only be condemned when it has been fairly tried and found wanting. The results achieved by it in the above case have impressed me deeply with its great value, and it is my purpose to still further test it in suitable cases. Apart from cases involving impending death from actual loss of blood, for which transfusion has already established itself on the Continent, there are many other medical and surgical cases in which benefit might reasonably be expected to follow its use. There is a class of medicines in daily use by every medical practitioner, known as blood tonics, analeptic tonics, and blood restoratives. Their efficacy is universally admitted; but their use, even in cases deemed suitable for their administration, is sometimes attended with no benefit. In such cases our resources are not exhausted. There is still left transfusion, incomparably the speediest and most direct blood restorative known to science. The impediments in the way of this operation becoming general have hitherto been shared between the profession and the public. The profession wait for proof of its efficacy, and the public hesitate to submit to it from an erroneous idea of its risks, either to the blood-giver, blood-receiver, or both. That this operation was attended with serious risks in former times no one will deny; but with a perfected apparatus, an improved method of operating, and with the means of measuring accurately every ounce of blood as it flows from the one individual into the other, these risks are now minimised. To the blood-giver there is virtually none, because an average adult in good health can bear the loss of half a pint of blood without fear of ulterior injurious consequences to life or health, and much less than that quantity will frequently be found sufficient. The blood-receiver can be guaranteed that the blood will pass into his circulation precisely as it flows in the living veins of him who supplies it, without loss of its heat or its gases, and without admixture of air or loss of its vital powers.

Dundee.

COMPLETE LOSS OF MOTION IN THE LEFT LOWER LIMB SIMULATING FRACTURE OF THE NECK OF THE FEMUR, THE RESULT OF A FALL.

BY SAMUEL SMITH,
SURGEON MAJOR, 1ST ADMINISTRATIVE BATALLION G.E.V.

GEORGE P——, who states his age as between forty-five and forty-seven years, but appears older, above the medium height, of ruddy complexion, sanguineo-nervous temperament, spare and muscular, by trade a carpenter, married and has a grown-up family, at present of temperate habits, but formerly drank to excess, while engaged in repairing the roof of a greenhouse, fell from the top of the steps upon which he was standing (steps fifteen in number), owing to the legs of the same giving way, and, falling upon both heels upon the floor, rebounded from thence, the small of his back coming violently into collision with a kerb.

Oct. 11th, 1877.—Three hours after the accident I found him in bed, with a pulse at 68, soft, tolerably full and compressible, and skin warm, but dry. He was sensible, but greatly excited and nervous, and stated that after falling he was rendered insensible, and remained so for half an hour, and that he did not strike the floor with his head. He complained of great pain in the back (lumbar region), left knee, and both ankles, and was utterly unable to raise or move the left leg or thigh, but affirmed that he had no pain in the hip, and that this was the condition in which he found himself to be on recovering consciousness.

On examination, the ankles were found to be swollen, and discoloured over their inner surfaces (astragaloid and scaphoid aspect); but there was no fracture nor displacement of the tibio-tarsal bones. The left knee was much swollen above the patella, which however occupied its normal position, and was otherwise intact. In respect of the hip, there was neither swelling, pain, nor, in fact, anything unusual to be observed. The position of the limb, however, was eminently suggestive of intra-capsular fracture; but there was neither shortening, resident pain in the joint, nor crepitation present, added to which the limb could be freely moved in all directions without difficulty or producing pain in the joint. The lumbar region presented as to the fourth and fifth spinous processes, more especially the latter, an unusual projection, otherwise they were apparently intact, but so exquisitely tender to the touch as to permit only of a very gentle examination, this being further the condition of the knees and ankles, added to which, in the back, the pain was constant, dull, and heavy, with sharp, pricking pains on movement. There was no fracture or detachment of any of the ribs. Partial priapism was noticed. A bandage was at once applied to the loins, and subsequently camomile and poppy-head fomentations ordered; the solid materials to be applied as a poultice beneath the bandage. He was also ordered a mixture containing sulphate of magnesia, nitrate of potass, nitrate of tincture of opium, and tartrate of antimony; to be kept on his back, with the limbs extended; to have beef-tea and milk *ad libitum*, but no stimulants. Brandy had been administered previous to my visit.

Oct. 12th.—Has not slept; pain less. Re-examination affords the same result. The knee-joint (left) contains fluid, and above the patella a soft well-defined swelling is present. There is absolute loss of power over the limb, which falls outward, and is to a certain extent flaccid, and can be moved freely in every direction without producing pain in the hip-joint. There is no shortening, or crepitation during motion. Tympanitis has supervened, for which turpentine stupes are ordered. To take chloride of mercury and compound jalap-powder to relieve the bowels. Pulse steady. Continue mixture. To have a chloral draught at bedtime. Has passed water, which does not contain blood. Later on in the day the pulse rose a little, and some passive effusion took place into the bronchial tubes, the respiration increasing in frequency in consequence. At night he was able to move the limb slightly. To continue the beef-tea and milk, and to have gruel, linseed-tea, and barley-water.

13th.—Has slept well. Skin still dry. Has passed water freely. Pulse 96, soft, compressible, moderately full; tongue cleaning. Tympanitis less; has passed flatus, but no stool. Can now raise the limb so as to semiflex it upon the abdomen, and is able to flex the knee to the same extent. Says he feels altogether better. Treatment to be continued.

14th.—More motion in the limb. Tympanitis persists; bowels confined. Has not slept. Pulse 90. Repeat draught. To have an enema of castor oil with tincture of assafœtida; and the fomentation to be continued.

15th.—Power over the limb nearly regained; swelling of the knee-joint greatly reduced. No pain in abdomen or tympanitis. Tongue cleaner; skin cool, but still dry; thirst less. Has slept better, and passed flatus freely per rectum during the night. Complains of pain in the back, and a feeling of soreness about the heels. Effusion into bronchi has disappeared; breathing natural; pulse 68.

16th.—Power over limb still more complete. Knee-joint (size and motion of) normal. Bowels still confined, and contain flatus. Pain in back less; no priapism. Has slept, but not well. Pulse 68.

17th.—Better. Bowels have acted once. Tympanitis again less. Complains of giddiness when raised. Has not slept well.

18th.—Still improving. Bowels again acted upon; tympanitis gone; pain over lumbar region less. To maintain the horizontal posture, but to use occasionally, as a relief, the inclined plane. Has not slept well.

20th.—Out of bed. Can walk well. Lumbar pain gone. From this date he proceeded *sine impedimenta* to complete recovery.

Remarks.—This case presents features so remarkable, that I cannot but believe it must prove interesting to practitioners generally. We have, first, the complete loss of motion in the *left limb only*, in conjunction with hyperæsthesia of that limb and of the lumbar region, coupled with (secondly) the general appearance of the limb as to position, eversion, and relaxation; the two former symptoms—taking into consideration the apparent age of the patient, together with the height from which he fell, the direct fall upon the heels in a perpendicular direction, thus transmitting the whole force of the shock directly through the plane of the limbs upon the heads of the femurs—leading almost irresistibly to the conclusion that the neck of the bone was fractured,—a conclusion, however, which was not arrived at owing to the absence of pain, crepitation, swelling, and shortening, together with the ability to move the joint freely in all directions without producing pain in or about the joint. Thirdly, the effect upon the spinal cord and brain, the result of the double shock from the fall upon the heels and back, giving rise to insensibility, paralysis of the left lower limb, with hyperæsthesia, tympanitis, constipation, and partial priapism.

The difficulty of diagnosis, and principal interest of the case, centres in the complete loss and recovery of motion in the injured limb, and to what cause this may be assigned. The absence of some of the usual and important symptoms which present themselves in connexion with intra-capsular fracture of the neck of the femur, or dislocation of the bone, together with the presence of motor paralysis, hyperæsthesia, constipation, paralysis of the muscular coat of the bowels, as evidenced by the tympanitis and lumbar pain, with partial priapism, remembering further the insensibility resulting from the fall without the head coming into collision with any object, conclusively point to shock as the cause, the spinal cord and brain suffering most. But why should one half of the spinal cord alone suffer? Added to which the sphincters ani et vesicæ were unaffected throughout, nor did the kidneys suffer. The only reason which for the present suggests itself to my mind exists in the belief that, as the left limb sustained the greater shock, as evidenced by the ankle and knee of that side suffering more severely than its fellow, so the corresponding half of the spinal cord suffered in like manner, in consequence of which the polarity of the cord was so affected for the time mentioned as to render it unable to perform its usual functions, its conductivity for will-power being absolutely *nil*.

Clifton, Bristol.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Chelsea Hospital for Women has received £500 towards the Building Fund from a trust by "T. D. E." The Central London Throat and Ear Hospital has received two hundred guineas, the proceeds of a ball on the 22nd May. The Rev. J. H. L. Gabell has given, in addition to upwards of £4000 previously, £2000 to the Delancy Infirmary, Cheltenham.

LIGATURE OF THE ARTERIA INNOMINATA FOR ANEURISM OF THE SUBCLAVIAN ARTERY.

BY R. T. GORE, F.R.C.S.

THOUGH the case to which these notes refer occurred more than twenty years ago, I have thought it right to publish it, even at this late period, as a contribution to the history of operative surgery.

D. D——, aged fifty-two, a tall, well-formed, and muscular man, was admitted into the hospital, Bath, Sept. 22nd, 1856. About three years ago his attention was directed to a swelling in the axilla, about the size of a walnut. In a few weeks it increased in size, with pain extending as far as the elbow. It remained stationary until the spring of 1856, when it began to enlarge rapidly, with increasing pain, and was observed to pulsate.

On admission, a large pulsating tumour was found occupying the right axilla, and extending upwards beneath the pectoral muscles and clavicle, until it came in contact with the scalene muscles. He appeared in fair general health, though much distressed by pain and want of sleep. The pulse was about 80, and the actions of the heart and lungs quite natural. The whole tumour pulsated more or less distinctly, with an aneurismal thrill. The swelling approached so near to the scaleni as to render the application of a ligature on its cardiac side impracticable.

The ligature of the arteria innominata was decided on, after consultation with the other surgeons to the hospital, and performed under chloroform on Sept. 24th, 1856. An incision was made a little above the upper margin of the clavicle along its inner third, and carried to about an inch beyond the sterno-clavicular joint. This was met by a second incision along the inner edge of the sterno-mastoid muscle, and the flap thus formed reflected upwards and outwards, including the sternal attachment of the sterno-mastoid. The sterno-hyoid and sterno-thyroid muscles were then carefully divided close to the sternum. A vein of some size was here divided, and tied at both ends. A very little, but cautious dissection exposed the arteria innominata; an aneurismal needle was passed behind it from the outside, and the vessel tied with a hempen ligature. Pulsation at once ceased in the tumour, and in the arteries of the arm and face on the right side.

The practical difficulties of the operation were by no means great, and in a long-necked person are, no doubt, much less than in the ligature of the subclavian on the outer side of the scalenus. The quantity of blood lost was quite trifling. The limb was wrapped up in cotton-wool and blankets. He passed a fair night with an opiate, and on the next day expressed himself much relieved. There was not any pulsation in the tumour nor in the arteries of the arm, though there was a faint one in the temporal artery. Pulse 110; skin cool.

Sept. 28th.—He had a rigor in the night, and there is a slight cough, and also a blush of redness around the wound, which begins to discharge rather freely. Three sutures were removed.

Oct. 1st.—The redness is less; the pulse 108; the cough nearly gone, and he has slept fairly.

5th.—He had a second attack of rigors, followed by tension of the tumour and arm. The arm kept up a fair temperature, and the blood in the veins moved slowly towards the heart. The treatment consisted in a free use of opiates and stimulants.

8th.—The unfavourable symptoms had nearly disappeared, the wound looking healthy and suppurating moderately; but it was noticed that the ligature had an impulse communicated to it by each action of the heart.

He went on fairly well until Oct. 10th, when, on the seventeenth day after the operation, during a fit of coughing, a clot of dark colour escaped from the wound, and was followed in fifteen minutes by a stream of arterial blood, which continued to flow until his death, within an hour from the beginning of the attack.

Necropsy, fourteen hours after death.—The arteria innominata was partially cut through by the ligature, which was firmly attached to it. Its cardiac extremity was scarcely at all contracted, but was partially plugged by a firm clot, three quarters of an inch long. The aneurismal tumour, now very much reduced in size, was filled by a firm coagulum occupying the subclavian, axillary, and upper part of the brachial artery. It was of an elongated, fusiform shape, and on the cardiac side came in contact with the scalene muscles. The carotid artery was blocked up as far as the bifurcation by a firm clot. The right subclavian vein was attached to the tumour and obliterated. The left subclavian vein was filled by a soft coagulum, and its coats thickened. The aorta was coated with many deposits of atheroma. Extending from the wound into the anterior mediastinum was a large cavity, stretching upwards in the neck under the sterno-mastoid muscle, and filled with offensive pus. The heart was healthy. The lungs were somewhat congested, and the bronchi filled with thin mucus.

Though the above case was unsuccessful, the impression it left upon my mind is, that under favourable circumstances the operation is in certain conditions justifiable and advisable, and that with the improved methods now available it may yet be followed by favourable results. Nor does it militate against that view if I add to this history the fact that more than fifty years ago a similar operation was performed in this city, followed by death on the fifth day. But in that instance, though the case was in many respects favourable, the operation was over-long delayed, and was at last undertaken somewhat hastily and unadvisedly, owing to the occurrence of a train of symptoms the true character of which was altogether misunderstood and misinterpreted. They were, in fact, the signs of an attack of acute pericarditis, which was a sufficient cause of death. The state of parts about the seat of ligature, as seen after death, was very satisfactory and promising, as there was a firm clot on the cardiac side, and no signs of suppuration in the mediastinum.

I may further state that preparations illustrative of the two cases are lodged in the museum of the United Hospital in this city.

Bath.

PHIMOSIS AS A CAUSE OF RUPTURE IN CHILDREN.

BY J. ARTHUR KEMPE,

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PHIMOSIS in children is a common occurrence, and numerous ill effects can undoubtedly be attributed to it—namely, incontinence of urine, fits, and other spasmodic affections, masturbation resulting from irritation set up by retention of smegma, balanitis, and, later on in life, cancer of the penis. Professor Sayre, in his work on Diseases of Joints, devotes a chapter to phimosis as a cause of talipes and other palalytic affections. Ziemssen, in an article on "Pressure Points," alludes to the pressure of a tight prepuce on the glans as a cause of paralysis. Lately Mr. Owen has quoted some cases of eczema caused by irritation of dribbling urine, the result of a long or adherent prepuce. He also says, "In cases of umbilical and inguinal hernia it is well to look to the size of the urethral and preputial orifices."

The organ, however, that chiefly pays the penalty of this congenital imperfection is the bladder, and Mr. Bryant, in "Surgical Diseases of Children," says: "I have seen this simple condition of the penis produce every degree of irritability of the bladder, even to hæmaturia, also retention from the same cause, also priapism." Hernia, too, is frequently met with in children. Malgaigne says one in every twenty-one children has rupture. The causes of hernia generally, whether occurring in man, woman, or child, are divided into two main divisions—(*a*) exciting, (*b*) remote; the latter consisting in imperfection of the abdominal parietes themselves, the former in circumstances which exercise a more than usual compressing force on the viscera which they contain. As an exciting cause, *straining*, either violent or continuous, holds the foremost place. Now straining may be brought about in a good many different ways—coughing, crying, &c. Straining from difficulty in micturition and evacuating the contents of the bladder, I find, has been alluded to by several authors—e. g., Erichsen, Liston, Sir A. Cooper, Spence, Pott, Arnaud, Lawrence,—all of whom

mention it in connexion with stricture, disease of the prostate, &c., in adults.

I have been unable to find any mention of difficulty in micturition as a cause of hernia in children, and the co-existence of phimosis and rupture seems hitherto to have escaped notice (except the allusion made by Mr. Owen, *vide supra*). The frequency, however, of phimosis and rupture together, as it occurred to me here, induced me to watch closely and see if it was anything more than a simple coincidence. I therefore took fifty consecutive cases (not selected ones); and found that out of fifty cases of congenital phimosis thirty-one had rupture, in five cases there was double inguinal hernia, and in many of them umbilical hernia as well (umbilical hernia *alone* has not been counted). In none of these cases was the rupture noticed at birth; the earliest was noticed three weeks after birth (here the prepuce was so tight that it was with great difficulty that the child could micturate at all), the latest two years and a half. In all of these cases circumcision was performed; in five the rupture never came down after the operation, and all have been much benefited.

Age.	Under 6 months.	From 6 to 12 mths.	From 12 to 18 months.	From 18 months to 2 years.	From 2 to 2½ years.	From 2½ to 3 years.	From 3 to 3½ years.	From 3½ to 4 years.	From 4 to 4½ years.	Totals.
Rupture ..	15	5	5	1	1	4	0	0	0	31
No rupture	4	3	2	3	0	4	0	1	2	19
Total ..	19	8	7	4	1	8	0	1	2	50

It cannot, then, be unreasonable, in the face of these facts, to suppose that a long and tight prepuce may be a cause of rupture in children. The sequel of events is probably as follows: the abdominal parietes are naturally weak in children, which renders them less able to resist impulses which project the viscera against weakened parts. Here, then, is a remote or predisposing cause. The exciting cause is, I think, readily supplied by the frequent and continued efforts that the child makes to overcome the obstruction offered by the tight prepuce. and by the cries uttered consequent on pain caused in making these efforts.

NITRITE OF AMYL IN SEA-SICKNESS.

BY J. RUDD LEESON, M.B.

I WAS much struck with reading Mr. Crochley Clapham's paper in THE LANCET of August 21st, 1875, in reference to the treatment of sea-sickness with nitrite of amyl, and the marked success he obtained with it. Having given the drug an extensive trial in cases of sea-sickness, I subjoin the following remarks as the result of my experiments.

Nitrite of amyl, according to my experience, certainly does good in sea-sickness, though to a less extent than is asserted in Mr. Clapham's paper. The vomiting certainly becomes markedly less, and often ceases altogether; but of course as people differ in their individual susceptibility to sea-sickness, so they do in their susceptibility to its remedies, and my results are nothing like so brilliant as those of Mr. Clapham, who, if I remember rightly, only found the drug to fail in about three per cent. of his cases. The relief is generally speedy, patients smiling gratefully after a few seconds' inhalation, and seeming wonderfully cheered to think that their dire enemy is being vanquished at last. If the drug is to do any good at all it usually does so almost immediately, and the horrid sense of nausea and "sinking at the pit of the stomach" quickly becomes lessened. I gave it till the usual flushing of the face and throbbing and fullness in the head occurred, and then the patients quickly went to sleep if left alone, generally awaking refreshed and feeling much better, but complaining of the fulness in the head, which in some cases lasted a day or two. In about three-fourths of the cases no vomiting occurred afterwards; in half the patients felt all right after their sleep and quickly reappeared at the table; in a fourth, though they ceased to vomit, they complained of a "feeling of sickness," which, with the troublesome throbbing and fullness in the head, left them little better than they were before; the remaining fourth were not improved in any way, except, perhaps, that they got a little sleep.

From the idea one starts with from books and hearsay, I believe the general opinion is that nitrite of amyl is a most dangerous drug, and one to be given with the greatest caution. I think the safest and surest way is to give it until some of its physiological effects are produced, the easiest to observe and one of the most constant being the general flushing of the face, especially marked in the forehead. Eight drops breathed from a handkerchief generally suffices, but as it is difficult to tell beforehand the amount each requires, I would advise five drops to begin with for men, and three for delicate women. But men take much more than this generally; ten drops often produced no visible effects, and not unfrequently fifteen and sometimes twenty were required. Stout flabby men require usually only moderate doses, such as eight drops; while thin, wiry ones seem often almost unaffected by doses which would horrify many, such as thirty drops.

Toleration of the drug soon becomes established. I lately had a patient who suffered from severe attacks of asthma. At first the amyl in five-drop doses gave great though temporary relief. In two hours after his first dose he could breathe thirty drops, with a slight easing of his breath only, but a most trivial flush occurring.

In delicate women, and men in whom there is the slightest shadow of a suspicion that their heart may be at all fattily degenerated, I would counsel the greatest caution, and to begin with two or three drops, and watch the effects carefully.

There are two theories about sea-sickness: one that it is owing to the food tossing about in the stomach, and teasing it and the diaphragm with its jactitations, nausea and vomiting being the natural consequence; the other that the stomach has nothing to do with it, its cause being a congestion of the brain and cord, which acts in a reflex manner in the stomach. Those who hold the latter, of course, would expect great things from nitrite of amyl, and, knowing as we do the marked effect it has on the "status epilepticus," one might become too sanguine. Which of these two theories is right I do not pretend to say, but I have an idea that most cases are due to a little of each, and that with a loaded stomach and congested liver we may expect but little from amyl; whereas in cases more purely nervous, especially as are seen in women, we have a very fairly successful remedy, and one that warrants much more varied and extensive trial than it has hitherto received.

Richmond.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

COMPOUND FRACTURE OF THE SUPERIOR MAXILLÆ AND NASAL BONES; ABSCESS OF THE EYELID; RELIEVED.

(Under the care of Mr. BRYANT.)

THE following notes were taken by Mr. C. L. Jones.

Joseph A——, a carpenter, aged twenty-four, was admitted into the Accident ward on May 25th, 1877, with compound fracture of the nasal bones. Both superior maxillary bones and both malar bones were movable. There was irregularity in the line of the upper teeth. The eyelids of both eyes were greatly swollen, and the right eye looked quite smashed. The wound on the nose extended transversely from ala to ala with a prolongation upwards to the root of the nose. The man had been working in a saw-mill, when

a piece of wood flew off a circular saw, and struck him on the face.

The edges of the wound on the nose were brought together with silk sutures, and the anterior nares was plugged with lint. He was ordered to suck ice. Soon after admission he vomited blood.

Next day he was comfortable, and had vomited no more blood. Temperature 99°; pulse 100. In the course of the evening the right eyeball was removed.

On the 28th, he was very restless and sleepless, but quite rational. The displacement of the superior maxillæ was more marked, especially on the right side. A four-tailed bandage was applied. Temperature 101·5°; pulse 90.

On the 30th the bandage was removed; the swelling was subsiding, and he felt much more comfortable. He had good sight with the left eye, but there was still great swelling of the eyelids, and a fetid discharge from the nostrils.

On June 11th there was still an abundant discharge from the nostrils. The swelling and pain, excepting in the left eyelid, had very much diminished. Temperature 99·6°; pulse 84.

On the following day the lower eyelid was incised by the dresser, and a quantity of pus let out. The cavity was then washed with a solution of permanganate of potash.

He gradually improved, and on the 13th the upper jaw was found to be united very firmly, and five days later the man was discharged. He was, however, readmitted on the 21st of June on account of swelling and inflammation of the right eyelids. Linseed poultices were applied to the eyelids. There was a little suppuration over the bridge of the nose. Temperature 100·4°; pulse 90.

On the 24th the lower eyelid was lanced; pus was evacuated, and on the following day the eyelids were much better. He was ordered quinine and iron three times a day. The lower eyelid was again lanced on the 30th, and some blood and matter escaped. On July 2nd the eyelids were still inflamed, and the patient complained of giddiness and faintness. The bowels were open; his tongue was white. Next day he was much better. The left eyelids were rather red, but there was very little inflammation. He was discharged.

FRACTURE OF THE SUPERIOR MAXILLARY BONES; BONES QUITE MOVABLE.

The following notes were taken by Mr. C. Harper:—

W. R——, a carpenter, aged thirty-two, was admitted on the 15th of August, having been kicked in the face by a horse. When admitted there was a good deal of effusion about the eyelids on both sides, and a large amount of bleeding from the nose, but none from the ears. The superior maxillæ were movable upon one another. The following day there was a great deal of swelling on both sides of his face. On the 18th the two middle incisor teeth of the upper jaw were quite loose, and the pain was now chiefly on the left side of the face. Temperature 98·8°; pulse 96. A few days later the pain seemed to be confined to his teeth, excepting when he ate, when he suffered in his jaw. The swelling of his face gradually went down. He soon could eat tolerably well, and was discharged August 29th.

LIVERPOOL NORTHERN HOSPITAL.

CHRONIC ABSCESS OF BONE, PROBABLY OF EIGHTEEN YEARS' DURATION, OCCURRING IN STUMP AFTER AMPUTATION OF ARM; OPERATION.

(Under the care of Dr. CHAUNCY PUZEY.)

PATRICK C——, labourer, thirty-seven years of age, was admitted on Feb. 12th, 1878, suffering from a painful stump of the right arm. The history of the case was this: His arm had been amputated (through the middle third) at the Northern Hospital, by Dr. Chalmers, twenty-two years before; the operation was performed for injury. He was two months in hospital, and the stump was quite healed twelve weeks after the amputation. About three years afterwards he fell on the end of the stump, which soon became very painful, and after a few weeks an abscess formed in it, which was opened. The wound soon healed, but ever since that time he had been laid up at intervals of about eighteen or twenty months some ten or a dozen times (he could not say exactly how often), with symptoms similar to those which now presented themselves. Sometimes an incision had been made; sometimes pus had escaped after poulticing only; but always, after remaining open for a few days, the wound had closed, and the symptoms for a time disappeared. On the present occasion it appeared that, as usual, the stump, after being apparently in a sound condition for about eighteen months, had for the last fortnight become painful again; so severe was the pain that he could not sleep at night. The stump looked a very good one; the cicatrix was somewhat adherent to the bone, which was, however, well covered. There were one or two marks of former incisions, but no signs of any sinuses ever having existed. In fact, except that the stump was over-round, somewhat tense, and hot, there was nothing to lead one to suspect disease. In one spot, where there was a feeling as of fluid, and which was excessively tender, a fairly deep incision was made, but nothing but free bleeding resulted. Two days later, after poulticing, another deep incision was made in another part of the stump, and this time some dark-coloured but odourless pus was evacuated. Two or three days after a probe passed into the last opening touched bare but not loose bone.

The patient was etherised, and the opening was enlarged downwards as far as the face of the stump. A finger passed in detected a bare surface of bone, and could be carried some little distance round the posterior surface of the shaft of the humerus. The old amputation-cicatrix was then laid open; three flaps were dissected back, and an inch and a half of bone sawn off. The interior of the bone was found converted into a cavity full of thick pus, exactly like honey in appearance; this cavity was lined by a thick red velvety surface. The saw had passed through the middle of it, for a probe passed about three quarters of an inch into the piece removed, and about the same distance up the remaining portion of humerus. Three quarters of an inch more of the bone was therefore sawn off, and perfectly healthy bone was reached. The wound was then thoroughly washed with chloride of zinc (forty grains to the ounce) solution. None of the soft parts were removed; the flaps were laid in apposition, with a large drainage-tube passed down the bone, and the stump dressed with terebene-oil. There was no after-trouble. The wounds were encouraged to heal from the bottom, rather than by primary union, and the man was made an out-patient four weeks after the operation.

An examination of the bone removed showed that the end of the stump was quite healthy. The end of the humerus was well rounded, partly adherent to the cicatrix. The abscess-cavity commenced about an inch from the end of the bone, and extended upwards for about an inch and a half. The compact tissue of the shaft was throughout this extent somewhat thinned, in some parts presenting outside a worm-eaten appearance, and in one place it had disappeared altogether, and there was an opening through which pus had escaped outside the bone. Nowhere was there any sequestrum found.

Remarks.—This case appears to be one of those "instances in which suppuration through the medullary tube of a bone was, in an early stage of the disease, deprived of its usual severity and danger by the escape of the matter from the interior of the bone through ulcerated openings in its walls. Long persistence of pain in a bone, followed by the sudden remission of it on the appearance of an abscess in the adjacent soft parts, form the chief part of the history of such a case. But its features may not be readily recognised." This quotation is from p. 37 of Stanley's "Treatise on Diseases of the Bones," and it is illustrated by a case of "suppuration in the medullary tube of the humerus." Circumscribed abscess of bone, generally occurring in the cancellous tissue near the articular extremities, is not very rarely met with; diffuse suppuration of bone, acute osteo-myelitis, is unfortunately of too common occurrence, but it is probable that such a case as that just recorded is extremely rare. Especially curious is the fact (at all events the history of the case seems to put it beyond the range of doubt) that the disease had existed for over eighteen years, the patient only occasionally suffering from it, and gaining long periods of relief by the safety-valve action of the ulcerated opening in the bone. The pus in the deeper part of the stump appears to have remained throughout aseptic, possibly from the sinuous course which it took, the effect being that of a valvular opening. If the nature of the affection had been suspected, the question of trephining the bone would have arisen. Probably, however, considering the extent of the abscess cavity and the amount

of disintegration of bone which had resulted, the process of recovery would have been very tedious, and therefore the thorough removal of the whole of the diseased bone was obviously the best plan that could be adopted for the speedy benefit of the patient.

MONTGOMERYSHIRE INFIRMARY.

PULMONARY PHTHISIS WITH EMPYEMA.

(Under the care of Dr. WILLIAM PRATT).

J. W——, a quack doctor, aged forty-four, first came under care on the 19th of January. He complained of breathlessness, cough, and pain on the right side. He said that he had coughed for years, and that he had been ill for some time before seeking medical advice. He seemed fairly nourished, and had evidently been a very strong man. Pulse 120; temperature 101° F. Tongue moist, but dirty. On inspecting the thorax there was an evident sinking under both clavicles, but more especially under the right. The right side also presented under the axilla a well-marked œdema, extending from the vertebral column round to the nipple, and bulging of the intercostal space. On percussion there was increased resistance over the apices of both lungs, more particularly over the apex of the right. All over the right side, from the spine of the scapula to the eleventh intercostal space behind, and from the second to the fifth intercostal space in front, there was complete dulness. It was difficult, if not impossible, to distinguish where the lung ended and the liver began. On the left side, front and back, the resonance was perfectly clear, excepting at the apex. On auscultation, the breath sounds were very deficient at the apices of both lungs, and on the right there was a great quantity of large moist crepitation. On the same side, where the dulness had been so complete, the vesicular sound could be heard everywhere, but weak, and afar off. On measurement, the right side exceeded the left by a good inch.

Phthisis of both lungs, more advanced on the right, with empyema on the same side, was diagnosed. The question was what to do with the empyema. As the patient's appetite was fair, it was resolved to put him on the most nourishing diet possible, with quinine wine as medicine, and to draw off the fluid by the aspirator in the hope that it might not re-form. Accordingly, on the 22nd January, an aspirator needle was introduced by the eighth intercostal space, on a line with the angle of the scapula, and ninety ounces of purulent fluid were withdrawn. The patient experienced much relief, and the breath-sounds came nearer to the ear. By the end of a week, however, the fluid had reaccumulated, and the patient was nearly as bad as ever. A second aspiration gave forty-three ounces. In ten days more the aspirator was again employed, and sixty ounces obtained. A week later fifty ounces came. A fortnight was now allowed to elapse. The patient's general health had certainly improved; the pulse was small, but only 100; and the temperature was normal. As, however, the fluid had gathered again, an incision was made in the side under the carbolic acid spray, a drainage-tube introduced, and both ends tied. Some very mild weather occurred about this time, and the patient improved wonderfully after the operation. He was able to get up and have his bed changed; his cough was light, his sleep sound, and he bade fair to see the summer over at least. The chest was dressed with carbolised tow every evening under the carbolic spray, and no smell was ever apparent. Early in April, however, there were some bitterly cold days and nights, and, in spite of good fires and every attention, the patient's cough became aggravated, blood appeared in the expectoration, and gurgling sounds were heard all over the apex of the right lung. The temperature rose to 101°; the pulse became weak and rapid, and rose to 140 and 150. Asthenia was evidently setting in, and the patient died quietly on the 5th April.

Necropsy twenty-four hours after death.—On opening the thorax, the lung was found very much retracted, the pleural cavity, which had contained the purulent fluid, bounded below by the diaphragm, on one side by the retracted lung, on the other side by the ribs, was capacious enough to contain a large fœtal head. It was perfectly dry and odourless, and contained no bands nor false membranes. The pulmonary and costal pleuræ were a good deal thickened. The apex of the lung on this side was strongly adherent to the costal pleura, and was much diseased, presenting two small cavities full of pus. The middle lobe was thickly studded with yellow tubercles. The inferior lobe, though very much diminished in size, was quite healthy. The left lung presented no traces of pleurisy ancient or recent, but its apex was much consolidated, and would have broken down in a few weeks if life had been prolonged. The liver was large and fatty. The heart appeared to be healthy, but under the microscope its muscular fibres were undergoing fatty degeneration. The kidneys and all the other organs were normal.

Remarks by Dr. PRATT.—This case is interesting as involving the question—What is to be done with an empyema complicating phthisis? I think the right thing was done, and I should not hesitate to do the same again. Though the patient was not saved, at least his life was prolonged, and his death made easier than if he had died from suffocation. The case was further interesting from presenting a well-marked œdema of the thorax, supposed by some to be pathognomonic of empyema, and from the fact that the discharge and cavity were kept perfectly sweet by the carbolic tow and spray dressing.

LUIGASOOGOOR STATION HOSPITAL.

ELEPHANTIASIS VULVÆ; OPERATION; RECOVERY.

(Under the care of Mr. HUME.)

A NATIVE woman of immoral character, aged about thirty years, presented herself at the hospital on the morning of the 12th April, 1878, requesting to be relieved of a tumour situated between her legs. On examination, it was found that she had elephantiasis of the vulva; the right labium was especially affected, so as to form a tumour eleven inches in length and twenty-six and a half inches in circumference. When she stood up the tumour reached her knee. From the friction occasioned while walking the tumour had become ulcerated on one side. She complained of one or two points on its surface being painful, and stated that it had been growing for four or five years. It had implicated the skin in front and behind the vulva, extending from the mons veneris back into the gluteal region as far as the tuber ischii. The left labium was thickened and hypertrophied, but not so as to cause inconvenience. As she was emaciated and weak, being one of the numerous sufferers in the late famine, she was well fed, and operation was delayed. She had had one child, which was weakly, and died soon after birth. She had had severe syphilis.

On April 17th, at 10 A.M., after having tried, by elevating the tumour, to empty it of blood as much as possible, an incision was made from above the pubis, near the mons veneris, and continued outwards and backwards to two inches behind the tuber ischii. A second was then made, beginning at the same place as before, and carried inside the tumour, past the vaginal opening, and by the median raphé, then outwards at the level of the anus, to meet the other incision behind the tuberosity of the ischium. A cut was next made through the neck of the tumour, and its attachments to the surrounding skin and tissues dissected out. The bloodvessels, which were numerous and of some calibre, were ligatured. As she was in a weak state before the operation, and had lost a considerable amount of blood during the operation, the wound was washed with some perchloride of iron solution and water to prevent oozing as much as possible. The wound was stitched up, and an opiate given, as well as two ounces of brandy in some water.

The temperature and pulse remained natural until the following evening, when she had an accession of fever, and they went up to 103° and 124 respectively. The fever was treated with repeated small doses of aconite, and on the evening of the 19th the temperature was 100·2° and the pulse 88.

On June 1st the wound was healed, except one small spot. As she had an inducement in the good feeding of the hospital to remain, there was strong suspicion that she wilfully retarded the healing. She had one or two attacks of intermittent fever of a very severe nature, which also delayed her recovery. The tumour after removal weighed 12 lb.

Reviews and Notices of Books.

The Public Medical Services: what they are, and what they are not. London: H. K. Lewis.

THIS little work professes to be a guide to candidates for commissions in the Medical Departments of the British Army, Navy, and Indian Services. There can be no doubt that a book of this kind, if written with accuracy and fairness and in a good spirit, might be very useful to young medical men seeking a career in any of the public services. We wish we could say that the anonymous author of the work before us had so written it as to deserve commendation, but we cannot honestly say that it is a safe guide even in its letter, much less in its spirit. The description of the mode in which the London examination is conducted, as given in pages 17, 18, 19, is full of errors, and calculated to mislead intending candidates on many important particulars. The author's description of the routine of the examination as regards days is wrong throughout, and he does not distinguish accurately between the subjects which are compulsory and those that are voluntary. The *selection* of candidates is made from those who obtain the highest marks in the compulsory subjects, marks gained in voluntary subjects are afterwards added, and the final *place* in the list of successful candidates is determined by the sum of marks obtained in the compulsory and voluntary examinations. Hindustani may be taken up by candidates for the three services as a voluntary subject, not merely, as the author states, by candidates for India. We notice with regret, at page 18, a charge brought against the staff of University College Hospital—for it is there the practical examination is always held, and not, as the author seems to suppose, in *any* of "the large London hospitals"—of misleading students in diagnosis by way of a practical joke. We believe there is not the slightest foundation for this unhandsome imputation.

In the section devoted to the description of the course of instruction given at Netley on the specialties of military and naval medicine, surgery, hygiene, and pathology, the author is a most unsafe guide. He assumes that the mere fact of a man having obtained a licence to practise his profession in the United Kingdom is *ipso facto* evidence of that man's fitness, without any special knowledge of the above subjects, to undertake all the duties and responsibilities, not only of practitioners of medicine and surgery in all the varied conditions of service in all climates, but to be safe advisers to officers in command at sea and on shore, in peace and war, on all questions affecting the health of fleets and armies. The writer seems ignorant of the fact that the medical officers of all the great military powers are subjected to a course of severe special training before entering either the army or navy. He deems it a hardship that attendance at the Netley lectures is made compulsory, as if the authorities, seeing the necessity for instruction, and going to the expense of giving it, would leave it optional with their future officers to avail themselves of this instruction or not, at their pleasure. In like manner this gentleman sneers at the lessons on "cardiac murmurs," on the "clinical thermometer," and is very witty on the subject of "duly qualified surgeons" being called on to witness "the amputation of a toe." The author professes great admiration for the late Dr. Parkes. This being so, before he publishes another edition of his work he should devote a few hours to the careful study of the evidence placed by that lamented teacher before the Council of Medical Education on the qualifications of "duly qualified surgeons" let loose on the world by some of the examining and licensing bodies of this kingdom. We think he will rise from his studies a sadder and a wiser man, and find that special instruction is needed by the "qualified surgeons" on a good many subjects, as well as those specified, before they can be trusted even to use and read a clinical thermometer to any useful purpose, to diagnose cardiac murmurs, and even to amputate toes in a surgical manner; and, let us add, from some personal experience of the acquirements of "duly qualified surgeons," to have their minds made up as to the right end of the microscope to be applied to the eye.

This "guide, philosopher, and friend" assures his readers that hard work at Netley means only "vanity and vexation of spirit," hinting that to take a distinguished place there exercises no good influence on a man's career, promotion going by "seniority" and "selection." Now surely, if promotion goes by "seniority," it ought to make a considerable difference to a man whether, when he leaves Netley, he is at the top or the bottom of a batch, say of twenty or thirty, or, as it has happened, seventy candidates.

Ure's Dictionary of Arts, Manufactures, and Mines. By ROBERT HUNT, F.R.S., Keeper of Mining Records, &c. Vol. IV. Supplement. London: Longmans & Co. 1878.

MR. HUNT, with the assistance of a staff of well-known scientific men, has in this supplementary volume supplied very many of the deficiencies of the first three, besides giving a tolerably satisfactory account of the progress of technology during the last two years. Of the longer articles we may mention as among the most important those headed Agricultural Machinery, Boots and Shoes, Dialling, Electric Light, Iron and Steel, Refrigeration, and Telephone, but there are dozens of others which might be included. The majority of the additions are well written and well selected, and although it is still easy to find many omissions and some errors in the work, we must not forget that perfection in a dictionary of so wide a scope is an absolute impossibility. The new volume does equal credit to Mr. Hunt and the publishers, and will for some time to come prevent our best technical dictionary from getting out of date.

OUR LIBRARY TABLE.

Under the Red Ensign. By THOMAS GRAY. London: Simpkin and Marshall; Kent and Co., &c. 1878.—This is a little book of some ninety pages, with appendices, written, or rather in great measure compiled, by Mr. Thomas Gray, Secretary to the Marine Department of the Board of Trade. It is published for the purpose of placing before parents and guardians, and also the boys themselves, all the practical "circumstances" of a nautical life. It shows very clearly, and, as we think, very successfully, what the work really is, shorn of that halo of romance as well as of misery by which it is usually surrounded in books that treat of the sea. In brief, it is probably the only reliable handbook to guide those who are choosing the sea as a means of gaining a livelihood, or assisting to choose it for others.

La Medicina Contemporanea Gennajo. Fratelli Dumolard. Milan. 1878.—This is a new Italian journal, conducted by Dr. Malachia de Cristoforis and Dr. Ariberto Tibaldi. It consists of a series of articles containing the pith of recent work published in the various home and foreign journals by men well informed on each subject. The subjects are considered under the heads of Clinical Medicine, Pathological Anatomy, and Ophthalmology. The extracts are well and intelligently written.

Kraniometrische Mittheilungen. Von Prof. Dr. MORIZ BENEDIKT. Wien. 1878. pp. 26.—The measurement of the skull is assuming day by day more and more important aspects, and is gradually becoming a matter of scientific accuracy. The little pamphlet before us contains an account, with drawings, of a very excellently constructed craniometer, by means of which all linear measurements of the skull can be readily and conveniently performed. We have much

pleasure in recommending it to all who are interested in this branch of anatomical investigation.

Zur Pathologischen Anatomie der Lyssa. Von Professor MORIZ BENEDIKT, of Vienna. pp. 7.—In this short pamphlet, taken from Virchow's *Archiv*, Benedikt refers to his earlier researches, points out how they are supported by Dr. Gowers' observations on the spinal cord of animals dying from rabies, and especially dwells on the thrombi and venous engorgements that are met with, and the indications of central neuritis that are invariably present. Reference is also made to Mr. Coats' cases reported in this journal last year.

Gazeta Medica di Bahia. No. V. Maio, 1878.—This number contains an article by the editor, Dr. Pereira, on the Hygiene of Schools; an Account of some Cases of Fibroid Tumour of the Uterus, by Dr. J. L. Paterson; a Memoir on Diarrhœa in Cochin-China, by Dr. A. Normand; a translation of a lecture by Claude Bernard on Sensibility; and minor articles.

La Independencia Medica. No. XXIX. July 11th. Barcelona.—The principal articles in this number are by Theophilo Bombasto on Cottage Hospitals, and a *résumé*, by Felipe Margarit, of the various methods of treating Aneurism.

THE RED CROSS IN THE CAUCASUS.

THE accounts which have hitherto been published of the operations of the Russian Red Cross Society during the recent war have not included any connected statement of the work done by the Society in the Caucascus. The *Journal de St. Petersburg* gives a summary of a pamphlet, seemingly official, recently published, which fills up the hiatus. From this summary we gather that at the commencement of the war the Red Cross Society organised, for service in the Caucasus, five sanitary detachments, to each of which was attached a movable depôt. These detachments, at first of small proportions, as the war proceeded became larger and larger, so as to meet the exigencies of the campaign. They kept pace, in short, with these exigencies, and received their fullest development with the formation of the flying ambulance of the Red Cross Hospital at Alexandropol, and with the junction with the detachments of the flying ambulances despatched from the central depôt at Moscow, and by the Marie Committee of the same city. The first of the ambulances referred to, that of the Alexandropol hospital, first had 20 beds, but the number was afterwards augmented to 40, and, indeed, at times it was extended so as to accommodate about 90 wounded. This ambulance was under the charge of Prof. Reyer, of the University of Dorpat; and its staff consisted, in addition, of 2 physicians, 3 assistant-surgeons, 4 sisters of charity, and 10 hospital attendants. The second flying ambulance—that provided by the central depôt at Moscow—furnished accommodation for as many as 170 sick and wounded. It had a staff of 3 medical men, 5 students in medicine, and 5 hospital attendants, under the direction of Professor Arséniew, of the University of Moscow. The third flying ambulance—that of the Marie Committee, of Moscow—had a staff of 2 physicians and 5 students of medicine, under the direction of Dr. Betling. The accommodation for the sick and wounded provided for by this ambulance is not stated.

The fixed Red Cross ambulances in the Caucasus were five in number.

1. The ambulance of H.I.H. the Grand Duchess Olga Féodorovna, organised first at Borjorn for 30 officers and 100 soldiers, and afterwards moved to Tiflis. The staff of this hospital consisted of a physician-in-chief, 4 physicians, 1 dispenser, and 22 sisters of charity.

2. The hospital of the committee of the arrondissement of the Caucasus, established first at Mazra for 210 beds, under the direction of Dr. Reyer, then moved to Kuruk-Dara, and afterwards to Arpatchaï, in the environs of Alexandropol. The staff of this hospital consisted of 7 physicians, 6 assistant-surgeons, 7 students in medicine, 14 sisters of charity, 31 hospital attendants, and numerous other persons concerned in the general administration.

3. The ambulance of the sanitary detachment of the nobility of Moscow. This ambulance arrived at Tiflis on June 27th, 1877, and its staff consisted of a delegate-in-chief, 5 other delegates, a physician-in-chief (Dr. Roznow), 5 other physicians, a dispenser and his assistant, 3 students in medicine, 3 assistant-surgeons, 16 hospital attendants, and 16 servants. During the winter the number of this staff was lessened.

4. The ambulance of Finland, under the direction of Dr. Krohn, and having as staff 3 other physicians and 8 sisters of charity. This ambulance arrived at Erivan about the close of August. It remained there until November, when it was moved to Tiflis.

5. The ambulance of the parish of the Dutch church of St. Petersburgh. This ambulance was put into operation with 20 beds, but the number was afterwards increased to 40. It was under the direction of Dr. Tilling, who had with him 3 students of medicine and 3 sisters of charity. This ambulance was established at Alexandropol about the middle of July, 1877, where it remained until the close of October, when it was moved to Tiflis.

One of the principal modes of assistance given by the committee of the Caucasus consisted in improving the installation of the sick and wounded in the sanitary establishments of the State, augmenting the staffs which cared for them, furnishing clothing, linen, bedding, and surgical instruments, and improving the food. In this mode the Red Cross Committee gave help to 64 sanitary establishments.

The Red Cross Committee of the Caucasus was formed of 16 members, under the presidency of General Prince Orbéliani; Lieutenant-General Stároselsky acting as secretary. A committee of 16 ladies was also formed for the province, and assisted greatly in organising the central depôt at Tiflis.

The sanitary staff of the Red Cross Committee of the Caucasus consisted during the war of 38 physicians, 6 dispensers, 31 students of medicine, 26 assistant-surgeons, and 270 sisters of charity. The disbursements of the Committee, irrespective of large gifts in kind, amounted in 1877 to 430,661 roubles.

New Inventions.

HOSPITAL DRAIN DISINFECTOR.

AN ingenious apparatus has been designed by Mr. W. Soper, M.R.C.S. Eng. and L.S.A., for the more efficient disinfection of drains, under the name of "the hospital drain disinfector." This apparatus consists of a conical pottery-ware receptacle, which can be dropped into the drain through a specially-arranged opening, so that the point of the cone dips into the current of sewage. The receptacle is charged with a mixture of black oxide of manganese, chloride of sodium, and dilute sulphuric acid, sufficient in amount to evolve chlorine gas for a period of twenty-four hours. The gas is continuously delivered into the sewage and drain from an aperture at the apex of the cone. The fittings of the apparatus, the mode in which it is suspended in the drain, and the arrangement generally, in the specimen submitted to us show excellent workmanship, and carefully provide against any regurgitation of sewer-air through the aperture of communication with the drain. It is claimed for this apparatus that it is specially fitted for the disinfection of hospital drains, particularly the drains of infectious disease hospitals, before their juncture with the common sewer. A modification of the apparatus has also been designed for cesspits and manure-pits. The apparatus is manufactured by Messrs. James Stiff and Sons, Lambeth.

CLINICAL THERMOMETER.

MESSRS. WEISS AND SON have produced a clinical thermometer of the ordinary construction, but with the glass oval in section, which causes it to act as a magnifier, and simplifies the reading of the register. The invention is patented, and will be esteemed an advantage by the profession.

THE LANCET.

LONDON: SATURDAY, JULY 27, 1878.

IN our issue of the 9th of March last we drew attention to a scheme for the reorganisation of the Indian Medical Service, which there was reason to suppose had been decided on by the authorities at Whitehall and the India Office. As far back as April, 1872, the Duke of ARGYLL had accepted the principle of a separate supervision of the civil duties of the Indian Medical Department and of a single administrative staff for military purposes, consisting of officers of both the Indian and British services, as is the case in general officers' commands. It devolved upon Lord NORTHBROOK to devise means for carrying out these principles, and, after consulting with one or two of the leading medical men in Calcutta, and referring the subject to the Governments of Madras and Bombay, the Viceroy early in 1873 drew up a memorandum on the reorganisation of the Indian Medical Department, which has formed the basis of the alterations to be effected in the service. At present four, or in some cases no less than five, distinct health administrations exist—namely, two for military purposes (the British and Indian Medical Departments); three purely civil medical or health administrations (inspectors-general of dispensaries, superintendents of vaccination, and sanitary commissioners); and, besides these, there are two other departments which arrogate a more or less independent and separate action (inspectors-general of gaols and principals of medical colleges). Thus it appears that there is a double military medical administration, one entirely military, and under the Commander-in-Chief, and another partly military and partly under the Commander-in-Chief, but more largely concerned with civil medical institutions, and for the purpose of civil administration placed under the Government of India, and, to a certain extent, under each of the provincial administrations. The Indian Medical Department, as at present constituted, is supposed to concern itself with all health matters and administration, but it has most unsatisfactory administrative relations to local governments and the various local medical administrations above enumerated, which are more under the authority of the local governments, and are not affiliated in any way to the General Medical Department. The same work is done twice over in many cases, and confusion and collision inevitably arise. From the same cause it occurs that, in place of a few comprehensive reports on health questions, there is yearly produced a host of reports, each "department" being compelled to send in a separate "report" of its proceedings, quite independently of all other "departments." There is, then, for purposes of military medical administration a double and divided agency and system of control, and for purposes of civil medical administration a still more complex agency and system of control. It seems, therefore, that there can be no question as to the correctness, as the Duke of ARGYLL remarks, "that it is most desirable to consolidate medical administration in India, and that the best way of doing so is by forming one Military Medical Department and one Indian Medical Department."

It is now proposed, or as we said before, probably settled, that officers joining the Indian Medical Service will receive commissions, serve at least two years in military charges, and be held always available for military employ. Officers selected for military employ would be placed at the disposal of the Military Inspector-General (as apothecaries now are). Having completed two years' military duty, it would be open to officers to elect to military or civil employ; if in the latter they would always be liable to recall to military duty on the occasion arising.

The Military Medical Department would be entirely confined to the administration of medical institutions, under the control of military authorities. It would be under the Commander-in-chief, consisting of one administrative head, either an officer of the British or Indian service; under him there would be as many deputy inspectors-general as may be found necessary, located at the head-quarters of military commands.

The Indian Medical Department would consist of an administrative head, under the Government of India, and subordinate administrative officers with local governments. The head of the Indian Medical Department would be selected from among the senior members of the service, and, according to Lord NORTHBROOK'S scheme, would be the agent and adviser of the Government of India on all medical and sanitary questions, and would deal with all matters connected with the selection, training, pay, &c., of medical services recruited in India, and deal with questions of medical education, civil medical institutions of all kinds, returns—in fact, would perform all the functions of a health department, assisted by an office staff of sufficient intelligence and power.

We are sorry to learn, however, that the home authorities have so far departed from the wise provisions laid down by the late Viceroy as to separate the Sanitary, both local and imperial, from the Medical Department, and so we shall have only a half measure or compromise introduced, a proceeding always to be avoided, and in this instance likely to destroy very much that was most to be commended in Lord NORTHBROOK'S scheme.

The present system of a double administration for the Indian and British Military Medical Services cannot be defended; it is evidently necessary to have one officer at the head of the Medical (Military) Department, both in peace and war, who should be held responsible for the organisation and working of the executive medical officers, whether in charge of European or native troops. At the same time it is equally certain that the complicated system of independent civil health administrations must be unified if any real practical work is to be done. These various departments have grown with the demands of the Government, and there must be a readjustment of the administration in a country like India from time to time.

NO good and lawful calling in life can be held morally responsible for the conduct of those who follow it, albeit there are some that hold out more opportunities for wrong-doing than others. To the right-minded, confidence begets an ennobling sense of duty; and to be entrusted with power is

to be charged with conscious responsibility. It would be a happy circumstance if none but the right-minded were attracted to the profession of medicine, or, having been admitted to its ranks, all who have gained the knowledge of good and evil, were also inspired with worthy motives. It is a painfully humiliating reflection that from time to time cases occur which betray the presence in our midst of men of utterly despicable character, who, for the safety of society and the credit of our cloth, need to be weeded out and brought to justice. A profession which deals directly with the issues of life and death, and labours among the occult mysteries of human existence with no more potent or watchful guardian than conscience, cannot be too jealous of honour, or too exacting in the demands of scrupulous purity from its members. If the wrong-doing of clergymen may endanger the spiritual interests of men, the evil counsel or corrupt practice of physicians and surgeons may go far to ruin body and soul. The law cannot be too rigorous in the pledge it demands from those who seek a licence to assume the terribly potent position and privileges of a medical practitioner. Society cannot be too close in its scrutiny of personal character, and the profession itself cannot be too punctilious in its regard for the training, status, and etiquette, which constitute almost the only safeguards it is possible to institute for the preservation of morals and integrity in practice. If the older medical corporations had not sunk to the level of mere licensing bodies, while new examining associations have been established on the same basis, without thought or care for the profession of medicine beyond keeping its portals and exacting the gate-money, it would be possible to look to the Colleges of Physicians and Surgeons for the maintenance of discipline. As it is the profession must trust to itself.

It is impossible not to feel that the public scandal of a medical man being convicted of gross crime, as in the recent case at Brighton, is humiliating, and may well be taken into serious consideration by the general body of practitioners. Self-respect bids us repel the thought that there are many black sheep among us; but we must not close our eyes to the fact that the relations which are now and again, we fear too often, established with those who trade in drugs, and sometimes act as touts for young practitioners, are of a nature to be strongly deprecated, as opening up the way to an undiscriminating exercise of professional functions, which is full of peril and ambiguity. The custom of prescribing and rendering medical and surgical assistance, so to say, second hand—the first person consulted being a druggist or quack—is not only objectionable, but unsafe; and those who are unwittingly led to enter into these connexions—either expressed or understood, whether in regard to general practice or a specialty—will do wisely to free themselves. Great evils have generally small beginnings, and being unequally yoked together with the unskilled is a not uncommon cause of anxiety and danger, which the inexperienced will be prudent to shun. Practitioners of maturer years who contract these trade alliances are unworthy the confidence of society, and of course sacrifice the respect of the profession. The obligations created by the mutual arrangement are too entangling to be shaken off, and in cases of "difficulty" and "embarrassment" they cripple the moral and manly sense. We hazard no conjecture as to the first cause of the particular case just decided when we point out that it probably took its rise in one of those unprofessional artifices to "get into practice" to which by impatience, or under the pressure of necessity, beginners and unsuccessful men are prone to gravitate.

Whatever may be thought of the general axiom, "a man must live," there is clearly no "necessity" that he should live as a practitioner of medicine. It is in no churlish spirit we advocate a more jealous guardianship of the ways of ingress to the medical profession. We have no wish to see a system of "purchase" established, but, beyond question, it is neither desirable nor prudent that young men without means of subsistence except the precarious allowance of generous friends, who themselves probably live from hand to mouth, should, impelled by curiosity or a certain sort of liking, enter a profession in which stable resources are indispensable. It is nothing to the point to instance the signal success of men who have begun in difficulties and triumphed over circumstances. There will always be such cases, but no youth has a right to speculate on the chance of his proving an exception to the rule of experience. For every quickly successful practitioner there are thousands who have to wait through long weary years for even a modest recompense; and of these suitors to fortune, too many, becoming exhausted in purse and principle, resort to first equivocal, and then sinister, methods of thrusting themselves on public notice. The essentially little men are content to make petty arrangements with druggists, and to institute cunningly-devised expedients for reducing fees and securing the patronage of servant-girls. The little-great tax ingenuity to contrive ways of bringing and keeping their names perpetually before the profession and society. In principle all these artifices are the same, though they differ in method; and around some, ambitious spirits succeed in throwing the glamour of enterprise and even philanthropy. It is always regrettable—though now and again, perhaps, unavoidable—that enterprise in science should take the shape of personal glorification, and philanthropy seem to point to personal advancement. The modest practitioner will shrink from anything and everything which he even fears may lead to a position exposed to challenge. The less scrupulous rush on; some fall, others seem to bound over the "difficulty," but they are not the less on that account to be distrusted and their momentary success deplored. We must repeat an opinion often substantially expressed in these columns, that the medical profession is not a career for the impecunious or men with very limited resources, but is one which even the gifted and successful can "make haste to be rich" without encountering a serious moral, social, and professional peril.

It is expedient occasionally to speak with intentional plainness on these matters. The Pharisee may exult in his thankfulness that he is not as other men, but it is vain to gloss over the fact that nothing short of high principle can preserve the medical practitioner from the "beginnings" of evil. There are wide differences of culpability, and a breach of the decorum enjoined by etiquette may seem a long way from transgression of the moral and social law, but the difference is only one of degree. There is no absolute safety outside the pale of the highest honour, and the man who will *stoop* at all may, in process of time, "stoop to anything.

Scandals which discredit the practice of our art reflect on the moral tone of the profession; and, instead of satisfying the instincts of indignation by simply repudiating men who have openly disgraced themselves and their calling, it would be well to search for the first wrong step which led to their ruin, that, for the sake of others, it may be pointed out, and happily avoided. It is scarcely possible that a man who had been so educated as to acquire respectable qualifications could have proceeded to the perpetuation of a heinous crime without first wandering from the path of duty into devious ways wherein the professional and moral conscience was first blunted, and finally destroyed.

WHO shall, and who shall not, perform ovariotomy? This is a question which must inevitably answer itself. The natural evolution of medical science will decide it. It is utterly vain for one section of the profession, whether it be the section of surgeons, or the section of obstetrists, to declare its exclusive competency and right to this operation. Yet this contention is actually witnessed in this country—and in this country alone. Here only would it be possible. Throughout the continents of Europe and America the statement that in some of our London hospitals the surgeons pure assert a right to perform ovariotomy to the exclusion of the surgeons obstetric will be received with astonishment, if not with incredulity. And if the question be examined with ever so little attention, the statement will hardly be received with less astonishment by the great body of the profession in this country, who are independent of corporate and class interests and prejudices.

The exclusive pretension of the surgeons pure not unnaturally springs out of their exclusion of obstetric knowledge from the domain of surgery. It is one of the many deplorable consequences of the anomalous constitution of the profession in this country. We have a College of Surgeons whose governing body rules that its function is to regulate surgery solely. Acting on this principle, it practically declares that a surgeon needs know nothing of medicine or of obstetrics. This involves the absurdity that a surgeon is competent—not only competent, but the only man competent—to perform all operations which become necessary in the progress of diseases strictly medical and obstetric in their origin. It is implied that the moment an operation becomes called for, the surgeon, by intuition or some other mysterious power, becomes master of a wide field of pathology and clinical experience, upon which he has hitherto looked down with disdain. When an operation has to be performed, the physician or obstetrist who has studied the case with all the light of cultivated intelligence is to be pushed aside. The man who best knows the origin, history, and tendency of the disease, its relations to other conditions, the diagnosis, and the indications for treatment, suddenly becomes incompetent to carry out the treatment; and he is expected to place all his knowledge at the disposal of the surgeon, to blot himself out, to submit to be handcuffed, in order that another may do that which he knows he could do as well or better himself. Will any man conscious of his power, zealous for the advancement of his art, anxious for the welfare of the patients who put their lives in his hands, and withal possessed of self-respect, long consent to occupy this ignominious position?

Had the College of Surgeons fairly represented the medical profession, had it understood its duty to the public, the difficulty that now agitates some of our hospitals would never have arisen. The College, by the narrowness of its policy, excludes obstetric science from its examinations, although it licenses its members and fellows to practise this branch of medicine. It excludes its own Fellows who practise obstetrics from a seat on its Council. It thus declares that obstetric knowledge is something to be abhorred, something it is injurious to possess. It is the most natural thing in the world that obstetric practitioners, having no College of their own, should seek a home elsewhere. That home they find in the more liberal College of Physicians. But this secession or expulsion from the College of Surgeons cannot deprive them of their peculiar surgical knowledge; it cannot absolve them from their strictly surgical duties. These duties are inalienable, inseparable from their daily work.

Ovariotomy springs as naturally out of obstetric experience as does the Cæsarean section; and there are many reasons why obstetric practitioners are especially qualified to practise it to the benefit of science and the public. Upon these we may dwell upon a future occasion.

THE question having been raised whether it would be advantageous to add to the already existing subjects of examination for admission to the Royal Military Academy and Royal Military College a physical competitive examination, a Committee consisting of the three Civil Service Commissioners, the Director-General of Military Education, one of the Assistant Military Secretaries, and one of the Assistant Adjutants-General, was appointed to inquire into and report upon the subject. Their report has just been published in the form of a parliamentary paper, with an appendix containing the opinions of the Governors of the Royal Military College, Sandhurst, and the Royal Military Academy, Woolwich, the Commandant of the Staff College, Aldershot, and of nineteen masters of public schools. An analysis of these opinions shows that one of the military officers—the Governor of Woolwich Academy—is unfavourable, and the other two are favourable, to its adoption. Of the schoolmasters, twelve are in favour of it, two against it, and five give a qualified opinion. The Committee propose that the competitive examination shall be held in—(1) riding, (2) walking, (3) running, (4) leaping, (5) swimming, and (6) gymnastics; and that competitors shall be restricted to three of these heads.

Notwithstanding the numerical preponderance in favour of its adoption, we think this scheme ill-judged, and likely to prove injurious to the candidates. Its inevitable consequence will be the introduction of a system of training,—at least for the walking, running, and leaping; and this, in our opinion, would be very prejudicial to lads at the age of sixteen or seventeen. It would also have a tendency to supersede the existing healthy school games of cricket, football, &c. The necessity for training will be obvious when we state that in walking no marks are to be given for anything under six miles an hour, while the highest marks are for seven miles and a half per hour. We are well aware of the advantage, or rather we should say the necessity, of physical fitness for military duties on the part of candidates

for commissions, but this might be readily ensured by an examination, as in the case of recruits for the army. The Director-General would have no difficulty in selecting a medical officer whose judgment as to the physical qualities of the candidates might be safely trusted, and whose decision should be deemed final and not liable to be reversed by interest at the Horse Guards.

But if the system of physical competitive examination be adopted, we think the selection of subjects unfair and injudicious. Of the advantage of riding and swimming there can be no question, but a large proportion of the candidates have not the means of practising the former or of learning the latter. Besides, riding is one of the special subjects taught at Woolwich and Sandhurst, and at a very moderate expense swimming-baths could be erected at these institutions, and instruction in the art be made compulsory on all the cadets. The advantage to be gained by the competition in running and walking is very problematical; great speed for a short distance is rarely demanded of the soldier, and is no test whatever of his powers of covering a long distance or enduring for a long time—qualities which may be of great value. We would recommend to the careful perusal of the authorities the letters of Sir I. ADYE, the Governor of Woolwich Academy, and of Mr. BULL, the Master of the Modern School, Marlborough, as pointing out clearly the serious evils likely to arise from the adoption of the proposed system.

WE are gleaning day by day, in a fragmentary though not altogether in an unsatisfactory way, further particulars as to the sanitary state of our new possession in the Mediterranean. And there is little doubt that many of the reports quoted as to the unhealthiness of the climate are much exaggerated. There are marshes in some parts of the island, and of course their inevitable accompaniment, intermittent fever, of a somewhat severe type. A Mr. R. H. LANG, who states that he has resided at Cyprus for some years, in writing to *The Times*, comments favourably upon the temperature, but remarks in effect that the chief towns all want the same sort of sanitary appliances required in England and elsewhere where dwelling-places have been built without any consistent or systematic arrangements as to drainage, water-supply, &c. He says that the town of Famagousta "is encumbered with *débris*, and the covered pits from which the Turks assaulted the walls in the sixteenth century are stagnant marshes to-day." He remarks, reasonably enough in effect, that the towns may, with a moderate expenditure, be easily made an agreeable and healthy place of residence, but that the marshes around must be drained, a supply of drinking-water properly organised and maintained, and barracks built for the soldiers. It is, indeed, by no means difficult to foretell that, if the troops are compelled to remain long housed only in huts, ague and other malarious disorders will soon work much mischief among them. The success that (according to Consul PLAYFAIR) has attended the planting of the Eucalyptus Globulus in Algeria should induce the authorities at Cyprus to try the experiment in that island also. Under any circumstances, it would seem judicious to send as few troops as possible until proper provision is made for their healthy and comfortable accommodation, having regard, too, to the fact that July is, as regards all Mediterranean districts, one of the most unhealthy months of the year.

The Opposition in the House of Lords was entirely justified in a strong expression on Tuesday afternoon as to the remarkable reticence of her Majesty's Government in affording details respecting this island, of which we have just assumed the protectorate. We mean details in every important particular, including, of course, climate and general sanitary condition. And as to these last we may fairly assume that the Government did not give any information because they were in possession of nothing more than can be obtained by anyone who chooses to refer to the Encyclopædia Britannica or Murray's Handbook. If our assumption be correct, it is so much the more important that all practical knowledge on these subjects should be obtained with the least possible delay, so that we may not repeat the serious and fatal errors committed in India and some of our colonies, of building barracks on unhealthy sites, &c. It seems, therefore, reasonable to urge that Sir ANTHONY HOME's staff should be strengthened in the way that we indicated last week, and a special report be submitted by him to the Administration before any permanent building operations are commenced.

Annotations.

"Ne quid nimis."

FEES FOR MEDICAL EDUCATION.

THE authorities of the various London medical schools (except the London, Middlesex, Charing-cross, and Westminster), and of Owens College, Manchester, have arranged for a simultaneous raising of the fees for a complete course of medical study to about £130. For this sum students will be entitled to a perpetual attendance on all lectures and hospital practice, except those in which a large amount of apparatus and material is necessary, such as practical physiology, practical chemistry, &c.—in which one course only will be included. Special differences will be found on comparing the several prospectuses, but these are very trifling, and depend on the peculiarities and exigencies of each individual school. The effect of this arrangement will be that students who enter for the ordinary curriculum only will find that their fees have been increased about 20 per cent. The striking out of numerous extra charges for subjects—such as comparative anatomy, &c.—which are required for the higher examinations will, however, so diminish the increase that it will practically make but little difference to those who are not content with the bare minimum of education that is insisted on for the lesser qualifications of the various examining boards. Unless some combination is effected by which students at the smaller schools may attend the more strictly scientific classes at the larger schools, it is difficult to see how a complete and thorough education, such as is required, for example, by the various universities, can be given for the fees which have been in vogue during the past twenty or thirty years. Medical training has undergone such a thorough reformation in late years that the older methods of education have become quite obsolete, and much greater demands are now made on the time and attention of the teachers and the appliances of the schools.

THE PUBLIC HEALTH (WATER) ACT, 1878.

THIS important Act has now been published. In its final passage through the Legislature it underwent modification, but the essential features of the Act, as originally proposed,

have been retained. The Act is to be construed as one with the Public Health Act, 1875, and is to come into operation on March 25th, 1879. It imposes upon rural sanitary authorities the duty of providing, or of requiring the provision of, a sufficient supply of wholesome water to every occupied dwelling-house; and, further, it imposes a penalty upon the occupation of any newly-built house or house which has been rebuilt in rural districts, unless and until the rural sanitary authority of the district has certified that the house has an available supply of wholesome water sufficient for the consumption and use for domestic purposes of the inmates of the house. The Act provides against the vexatious application of the powers here given to the rural sanitary authority. It provides also for the extension of the Act to the districts of urban sanitary authorities if the Local Government Board thinks fit.

RISKS IN THE OBSTETRIC USE OF CHLOROFORM.

WE have been accustomed to think of lying-in-women as possessed of some special tolerance of chloroform and other anæsthetics. Undoubtedly they have escaped in a high degree the fatalities which are too familiar in surgery. But a careful paper before us, by Dr. William T. Lusk, of New York, "On the necessity of Caution in the Use of Chloroform during Labour," reminds us that even in obstetrics the use of chloroform becomes dangerous if not carefully practised by qualified men. Dr. Lusk especially deprecates the tendency to leave its administration to nurses. Dr. Lusk's views will be gathered from the following propositions:—1. *Deep anæsthesia, carried to the point of complete abolition of consciousness, in some cases weakens uterine action, and sometimes suspends it altogether.* He insists on the propriety of allowing the patient to recover some consciousness in cases where chloroform is given during delivery by forceps. Otherwise, the uterine action being suspended, hæmorrhage "is certain to follow." For ourselves we do not see the necessity to give chloroform deeply for the purpose of using forceps. Where it is given Dr. Lusk's precautions should certainly be observed. 2. *Chloroform, even when given in the usual obstetrical fashion—viz., in small doses—during the pains only, and after the commencement of the second stage, may, in exceptional cases, so far weaken uterine action as to create the necessity for resorting to ergot or forceps.* He thinks that those who habitually use chloroform in normal labour resort to forceps more frequently than others. 3. *Patients in labour do not enjoy any absolute immunity from the pernicious effects of chloroform.* In support of this proposition he has gathered five cases together in which death either occurred or was threatened, and in which there was no cardiac or pulmonary complication. In two cases the patient ceased to breathe and the pulse to beat. In a third, in which only "a little" chloroform was given on a handkerchief with each pain, the breathing suddenly stopped, and the pulse ran down alarmingly. Under the Marshall Hall method of treatment she soon began to breathe again. Of the five cases two were fatal. One was a *primipara*, going on well but for a slight convulsion as the head was emerging. The other, reported in 1876 in our columns, was a *multipara*, in which chloroform was given under the direction of a Sister of Charity, preparatory to version for shoulder presentation. 4. Dr. Lusk's fourth proposition is *that chloroform should not be given in the third stage of labour. The relative safety of chloroform in parturition ceases with the birth of the child.* He thinks it a most dangerous practice either for putting sutures into a ruptured perinæum or for the removal of the placenta. In a case of the latter sort, where, after a long labour ended by forceps under complete anæsthesia, hæmorrhage occurred, and it was thought desirable to remove the placenta. As the patient resisted the introduction of the hand, a little chloroform was given. But sudden and fatal collapse followed, and, Dr. Lusk says, made such an impression on him that nothing would induce him to give chloroform again in that stage of labour. Dr. Lusk's object is not to deter from the reasonable use of chloroform in labour, but to commend precautions which will make it absolutely safe.

RED CROSS FLEETS AND NAVAL AMBULANCES.

DISCUSSING the question of a Red Cross fleet, which has recently been broached, and is still receiving consideration in Russia, the *Messager de Cronstadt* expresses the opinion that it should be just as practicable for the Red Cross Associations to give, in time of war, assistance to sailors as to soldiers. It holds that it should be easy to provide for any insufficiency of hospital accommodation for navies by converting to hospital purposes the hulls of ships no longer used for navigation. A fleet being much more movable than an army, the question of transport of the sick and wounded is more readily solved. There are, no doubt, occasions when systematic provision for transport would be necessary, as in the case of a squadron engaged in a blockade, or of a ship occupied in special service which would not admit of its putting into port. In these cases old men-of-war steamers which have been withdrawn from active service would become useful. Fitted up as ambulances, flying the Red Cross flag, and commanded by officers of the mercantile marine, they would prove in these circumstances of essential service for transport and treatment of the sick and wounded. Of course the work of such steamers would be limited to the waters under the control of the fleet to which they were attached, otherwise the Red Cross flag might be made use of to further the purposes of war. In debatable waters the position of these ships would be difficult, because, from the exigencies of naval warfare, they could not be exempted from capture. Where a fleet forms part of the defensive force of a port, there a Red Cross naval organisation may render the greatest services. Moreover, the Red Cross may also afford great assistance to fleets and ships of war by supplementing the medical staffs and the medical stores and comforts as among the land forces.

THE PROVIDENT DISPENSARY QUESTION IN BIRMINGHAM.

A REPORT on provident dispensaries addressed to the members of the Midland Medical Society and the local branch of the British Medical Association has just been issued by the officers of the Joint Committee of those bodies, from which it appears that there is either unwillingness or apathy on the part of the Committees of the various medical charities of Birmingham to go into the question of the abuse of hospitals, and to provide checks to the present indiscriminate system of gratuitous medical relief. The Joint Committee declare that the number of recipients of medical charity has for many years increased in a far larger proportion than the population, and that to encourage such abuse or permit it to continue is to foster improvidence and fraud. Every thinking man must admit the truth of this latter proposition. Provident dispensaries have, however, been suggested as a means of affording medical assistance, which would enable the working classes to help themselves, and to be independent of the medical charities, and of thus checking, or at any rate diminishing, the abuses which are now so frequent. Whether they are the best remedy for the abuse of our medical charities is, of course, for the present an unsettled question, and it must remain so until the provident dispensary system has had a longer and more thorough trial.

In Manchester, we learn from the report, that although

the guarantors have for some years paid in round numbers £1000 per annum in aid of provident dispensaries, the members subscribing to them have largely diminished, and the scheme has failed to commend itself to the local members of the medical profession. It would be interesting to learn whether in other towns provident dispensaries have also been equally unsuccessful or comparatively useless, but our own impression is that they may be made valuable adjuncts to existing medical charities, and that by their action much the gratuitous relief now so indiscriminately given away might be curtailed. The Joint Committee, in conclusion, send in their resignation, and leave it to the original promoters of the provident dispensary scheme to carry out their plans as they may think proper.

LIGATURE OF THE CAROTID FOR HÆMORRHAGE AFTER ERYSIPELAS.

A SINGULAR CASE, for which ligature of the carotid was employed with success, was lately communicated by M. Denucé to the Académie de Médecine. The patient was a young officer who suffered from a suppurating otitis, accompanied first with severe pain and afterwards swelling in the temporal region, with erysipelatoid redness. Three incisions were made into the swelling, each at a few days' interval. The last was followed by considerable hæmorrhage, easily repressed by the application of perchloride of iron and by pressure. Eighteen days later, while the patient was rapidly improving, a large hæmorrhage suddenly occurred, filling the cavity of the phlegmonous abscess, and escaping in jets at the several openings. Compression and ligature of the temporal artery did not arrest the hæmorrhage, and the cavity was therefore filled with lint soaked in perchloride of iron, which for the time stopped the bleeding. Two days later it recurred, and was arrested by the same means, but a considerable increase of the sloughing inflammation was the consequence, and the abscess spread to the region of the jaw, and thence a fresh hæmorrhage occurred externally and into the mouth. Compression and perchloride of iron were again resorted to, but the patient had become extremely anæmic, and evidently unfit to bear a fresh hæmorrhage. The common carotid was therefore tied, the tumefaction of the upper part of the neck being too great to permit of ligature of the external carotid. The huge temporal cavity was then emptied, and its blackened walls dressed, with slighter pressure, and daily washed out with a solution of "coal-tar saponine." The walls rapidly presented granulations, and at the end of a month cicatrisation was almost complete. The ligature fell without any disturbance, and the patient rapidly recovered.

NAVAL AND MILITARY NOTES.

SEVERAL medical officers of the Austrian army have recently been engaged at Aldershot in inspecting the Army Hospital Corps, specially respecting the performance of their duties as carrier-bearers, and as applying the field dressings to wounded men on the battle-field.

There will be another examination of candidates for commissions in the Medical Service of the Navy on the 12th of next month.

The *United Service Gazette* reports that the health of the *Undaunted's* crew is improving, and that by last advices only thirty-six men were on the sick-list. The *Western Morning News* imputes this improved state of things to the fact that more care has been exercised in drilling the men "while the thermometer stands at 93°."

The Admiralty have recently issued a notice desiring that no charge should be made when medical assistance is given by naval officers to the crews of merchant ships.

The Medical Director-General of the Navy was occupied during part of last week in inspecting the establishments in Chatham Dockyard.

The crew of H.M.S. *Tourmaline* have recently been working in the hold of the stranded steamer *Tasmanian*, off Antigua, endeavouring to clear it of coffee. The excessively bad state of the bilge-water seems to have induced in many of the men a severe form of conjunctivitis, and most of those so affected are off duty.

The port of Dumeigh, in the Red Sea, is likely to be used as a quarantine station for pilgrim ships, and H.M.S. *Vestal* has been ordered there in order that an official report may be made on the subject.

A Bill for the reorganisation of the Cape Armed and Mounted Police has recently passed the Colonial Parliament. His Excellency Sir Bartle Frere, in an official minute on the subject, comments very emphatically on the unnecessary fatigue and hardships to which these men were exposed in the late Kafir war, the inevitable result of this treatment being that "a large proportion of the men have broken down in health, dysentery, rheumatism, and heart disease ensuing upon the cruel, protracted exposure to which they are subjected." The *Cape Times*, from which this synopsis of the Governor's minute is taken, says that in one campaign no less than twenty per cent. of the men employed have been invalided. And this in one of the healthiest climates in the world!

The Medical Director-General of the Navy inspected the Royal Naval Prison at Lewes on Tuesday last.

Dr. Edward Moss, R.N., one of the surgeons in the late Arctic Expedition, is the author of "The Shores of the Polar Sea," a book just published by Marcus Ward and Co., giving, with both pen and pencil, a vigorous description of life in high latitudes.

INFANT MORTALITY AT LEICESTER.

A FEW years ago Leicester and Yarmouth were pointed out in the Registrar-General's report as the two towns in England that suffered exceptionally the highest mortality from diarrhœa. The latter town apparently took the rebuke to heart, for it started on a career of sanitary improvement, which has resulted in a continuous diminution of the annual death-rate from diseases of the zymotic class. Leicester, on the other hand, seems to have ignored the subject, for we find during the week ending June 30th—a week which showed a general increase in the fatality of diarrhœa throughout the kingdom—Leicester again taking the lead, and returning a fatality from this disease nearly three times as great as the average rate from this cause in nineteen other large provincial towns. To what exceptional causes is this disgracefully constant mortality due? Neither meteorological conditions, nor insufficient and improper quality of the food, nor want of adequate maternal care can be urged as a sufficient excuse, for these conditions are equally present in other towns; and there is simply no evidence to show that Bristol, Birmingham, Liverpool, and other large midland towns enjoy exceptional meteorological advantages, or that their infants are better fed and more properly cared for than is the case at Leicester. The factor, however, that is not constant in these towns is their "sanitary condition," and on this point we have no hesitation in saying Leicester lags conspicuously behind its neighbours. If, therefore, Leicester wishes seriously to combat this great evil, and her public men to shake off the serious responsibility that attaches to them whilst this great mortality continues, they must set themselves earnestly to work to improve the sanitary condition of the town. In giving this prominence to the necessity for sanitary improvement at Leicester, we do not for one moment wish to discourage those who are endeavouring to improve the "infant feeding" in the town. We believe that such efforts will do much to lessen the infant

mortality not only in Leicester, but in other towns where the same lessons are as urgently needed. But we desire to record our opinion that the exceptional fatality from diarrhœa at Leicester is not due to an exceptionally vicious system of infant feeding peculiar to Leicester alone, but to an exceptionally insanitary condition which imperatively calls for amendment.

CLAPTON ASYLUM FOR IMBECILE CHILDREN.

THE third annual report of the committee of this asylum has just been published; as it is the last that will be issued from Clapton, it is of exceptional interest. In October next the children will be transferred to Darenth, in Kent, and it is expected that better results in teaching and in health will be derived from the change. The asylum at Clapton is very unsuitable for the purpose for which it is now used, whereas the new building is constructed with every regard to the sanitary welfare and the education of imbeciles. The most important information in the report is that the Local Government Board has sanctioned the erection at Darenth of two blocks and workshops, to which children at the age of sixteen, who are improving but not cured, may be transferred, instead of sending them to the ordinary asylums for adults. This is undoubtedly a great step in advance, and we shall watch with much interest the effect of this prolongation of their education. The number of children resident in the hospital in December, 1877, was 343, and the death-rate during the year was only 3·8 per cent., which is a remarkably low average, considering that the vital force of such children is necessarily lower than normal. The asylum has been comparatively free from contagious diseases, for only one case of scarlet fever and seven cases of measles have occurred during the year. Seventy-two boys and thirty-nine girls are employed in various industrial occupations, three have "recovered" and been given over to their friends, and for these employment has been found. This, at first sight, seems a small number, but many others are improving, and under a prolonged training the recoveries will increase from year to year. The reports of Dr. Beach, and of the schoolmistress, are supplemented by some statistical tables, which will be of great use for comparison in future years under the new *régime*.

THE ACTION OF ARSENIC.

THE effect of arsenic upon animals has lately been carefully studied by Gies, who has administered to rabbits, fowls, and pigs during months gradually increasing doses of arsenious acid, the daily dose being—rabbits ·05 to 7 milligrammes, the fowls 1 milligramme to 8 centigrammes, and the pigs 5 milligrammes to 5 centigrammes. All the animals became heavier and fatter, and there was a considerable growth of bone, both epiphysal and periosteal. In all parts of the bones in which there is normally spongy substance, the animals fed with arsenic presented compact bone. The carpal and metacarpal bones, for examples, were compact throughout, and beneath the cartilages of the epiphyses was a compact layer of bony hardness, just as in animals fed with phosphorus. The bone corpuscles of this layer are smaller and less numerous, the Haversian canals are smaller and fewer than normal. These changes were observed after only nineteen days' feeding. Strangely enough, however, the same bone changes were found in other animals kept in the same stall as those which were fed with the arsenic. Gies attributes this to the excretion of the arsenic by the skin and lungs of the animals to which it was administered, and its absorption by the others. Similar changes were found in the bones of animals which were kept in a cage beneath the perforated floor of which arsenic had been scattered. Adult animals fed with arsenic presented a considerable thickening of the cortex of the long bones, and with this there was produced more or less fatty degeneration of the muscular tissue of the heart, of the liver, of the kidneys, and even of the spleen. If the dose of arsenic was further increased, the changes in the bone were masked by those of chronic arsenical poisoning—gastritis and hyperæmia of the whole intestinal tract, and intense fatty degeneration of various organs. The young produced by rabbits during the process of poisoning were dead, but large in size, and presented a commencing osseous change similar to that described, and also a considerable hypertrophy of the thymus.

MILITARY ATHLETIC SPORTS.

THESE came off at the Lillie-bridge grounds on Saturday last, under the patronage of H.R.H. the Duke of Cambridge, and in aid of the funds of the Royal Cambridge Asylum, Of course there was a large and fashionable attendance. The events were the heavy marching-order championship, the lance and sword championship, tent-pegging, and lemon-cutting. We should not have considered it necessary to notice this meeting specially, but that we deem it our duty to protest strongly against the folly and cruelty of the first of these competitions. The competitors were required to cover twenty miles in heavy marching order, carrying full regimental kit, the pace (walking or running) being left to their discretion. The prizes to be gained were £10 to the first (in addition to holding the challenge belt), £5 to the second, £2 to the third, and £1 to the fourth. We do not know whether to wonder most at the folly of the committee in organising such a competition in the middle of summer, with the thermometer at 86° in the shade, or of the fifteen competitors who came forward on this occasion. We confess we are unable to see any benefit that can arise from such a competition, and we regret that the Duke of Cambridge, in his zeal for a charitable institution, should so far forget his interest in the soldiers as to sanction such a useless expenditure of energy and such a risk to the health and constitution of the competitors. We trust that in future he will withhold his sanction from so unseasonable an exhibition.

"PALMAM QUI MERUIT FERAT."

THE annual meeting of the Leavesden Asylum authorities, held at the institution some few days ago, recalls to our minds the great and good work performed by the late Dr. Anstie and his colleagues in connexion with the establishment of the Metropolitan Asylum Board. In 1867 "THE LANCET Sanitary Commission" was formed, of which Anstie was one of the leading workers, the practical result of which was the passing of an Act under Lord Cranbrook (then Mr. Gathorne Hardy) which led to the building of the hospitals now managed by the Metropolitan Asylums Board. "*Palmam qui meruit ferat.*" We read last week a paragraph in *The Times* that appeared to us too little accurate in apportioning praise to those who worked well in the cause of humanity. This is the more important because several of the workers above referred to are gone from among us, and we have a tender and grateful recollection of their labours.

HEALTH OF CUSTOMS OFFICERS.

DR. WALTER DICKSON, R.N., Medical Inspector of Her Majesty's Customs, has recently presented his annual report to the Commissioners. Both divisions of the force have, during the past year, presented an unusually heavy sick list, exceeding that of the previous year by 25 per cent. Most of the increase, however, was due to cases of chronic disease, only seven cases of small-pox having occurred, none of which were contracted while the men were on duty on the river or in the docks. The mean daily number incapacitated by disease or injury has been 42, or 4½ per cent. of strength.

The ratio of admissions to the sick list has been 83 per cent. of the mean strength of the force, and the mean duration of each case has been twenty days. The mean rate of mortality during the last twenty years has been 12 per 1000, and of superannuation 7 per 1000. A comparison of the same class of officers at the port of Liverpool is made by Dr. Dickson, who finds, as to the latter, unusually favourable results. We have before remarked that the value of these statistics consists in their applicability to other classes of the civil population, and have again to express our regret that the valuable example set by Dr. Dickson and his predecessors has not been followed in other departments of the civil service.

VENTILATION OF THE HOUSE OF LORDS.

IN reply to a question put to the Lord Chancellor on Monday by Earl Granville, respecting the defective ventilation of the House of Lords, Lord Cairns indicated by his reply that he, in common with the majority of men, is still imbued with the notion that the plenum (as contrasted with the exhaust) principle is the proper one. The pertinacity with which this notion is nursed appears somewhat extraordinary, whether public buildings, private houses, ships, tunnels, or drains, are under discussion. Most persons who speak and write about this important subject fail to remember, or if they remember, do not sufficiently appreciate, the fact, that by pumping or persuading clean air in, the foul and heated air is *not* always, as a matter of course, driven out, but is more often driven up to and condensed in holes and corners, where in all probability the presence of a pure atmosphere is specially important. The exhaust system is so simple, and may be made under many circumstances so completely automatic, that its manifest advantages on shore as well as afloat ought by this time to have been fairly established.

THE PHARMACEUTICAL SOCIETY AND THE MEDICAL ACTS AMENDMENT BILL.

AS was hinted in THE LANCET of last week, the action of the Pharmaceutical Society in sending a deputation to the Lord President of the Council to confer about what may be called the "counter practice" clause was not likely to be successful. The *Pharmaceutical Journal* very properly quotes the natural rejoinder of the Duke, to the effect "that the Medical Act would not be the proper channel through which to enlarge their (i.e., the chemists') privileges." Nor would it. We consider it fortunate (not as the journal says, *un*-fortunate) that "great attention has been drawn to this subject of late," and are sure that the result will be advantageous to all pharmaceutical chemists, because their status will be strengthened, and their relations with our own cloth far more cordial than they have been hitherto, mainly on account of this vexed question.

THE PRESSURE OF THE CEREBRO-SPINAL FLUID.

M. BOCHEFONTAINE gives, in a paper read before the Académie des Sciences, the results of his researches on the pressure of the cerebro-spinal fluid. His experiments were made on five dogs. He found that in an animal breathing without effort and perfectly calm the pressure of the fluid was maintained in equilibrium with that of the atmosphere; that with each cardiac systole the pressure augments, but the increase does not amount to more than 0·5 mm.; that under the influence of expiration the increase of the pressure of the fluid reaches as high as 5·5 mm.; that cerebral concussion, not accompanied by respiratory or cardiac syncope, may produce an augmentation of pressure of one or two millimetres above zero, which is almost instantly followed by a corresponding depression below zero, which again lasts only a few seconds; that cerebral concussion, when accompanied by respiratory and cardiac syncope of transitory duration, is not indicated by any change in the pressure of the cephalo-rachidian liquid; and, lastly, that the same is true of fatal concussion, the pressure of the fluid remaining the same as that of the atmosphere.

CAUSES OF DEATH IN THE WINDWARD ISLANDS.

THE Lieutenant-Governor of Grenada, in forwarding his returns of the vital statistics of the island for the year 1877, calls attention to the fact that, under the provisions of the Medical Aid Act, which came into force on the 1st of May, 1877, persons registering deaths are "required" to produce certificates of their causes from a medical officer. Notwithstanding this provision, however, although 1234 deaths were registered during the year, only 172 medical certificates were handed in, showing conclusively the inefficient working of the Act. It is stated that further legislation is being considered, with a view to remedying the defects in the working of this Act. The death-rate in the island during the year was equal to 28·2 per 1000 of the estimated population. It is unsatisfactory to learn that, although 1757 births were registered, "little vaccination was performed in 1877," owing to the difficulty of obtaining effective lymph.

WIMBLEDON CAMP.

THE annual meeting of the National Rifle Association has passed off with great success. The weather was splendid, and there was not even the usual thunderstorm to test the quality of the tents. The shooting was unusually good; the conduct of the Volunteers was, with one exception, excellent; and there was the usual entire freedom from accidents with firearms. It is true two rifles burst, but in one instance without any, and in the other with very slight, injury. The health of the camp was excellent, and the arrangements in connexion with it, under Surgeon-Major Elkington, of the Grenadier Guards, and Surgeon Pocklington, of the 1st Surrey Rifle Volunteers, were all that could be desired. The proceedings were wound up on Saturday with the athletic sports (which have for the last two years taken the place of a review), and with the presentation of the principal prizes by H.R.H. the Duke of Connaught. Judging by the number of visitors to the camp, the meeting continues, and deservedly, to hold a high place in popular estimation.

AN ARAB REMEDY FOR HYDROPHOBIA.

THE wide distribution of rabies is curiously illustrated by the belief among comparatively uncivilised races in specific remedies for hydrophobia; and the recognition of the disease, and of the connexion between it and the antecedent bite, is an illustration of the remarkable accuracy of the rude pathological observation of uncultured races. A note on a popular Arab prophylactic was lately communicated to the Société d'Entomologie of France from M. de Chevarrier, of Gabes, in Tunis, accompanying some fragments of Coleoptera, recognised by M. de Saulcy as belonging to the Melve tuccius (Rossi) and the Mylabris tenebrosa (Castelnau) — insects which possess a power of blistering similar to that of the Cantharis vesicatoria. Their congeners are common in France. The note stated that the fragments had been obtained south of Ouderna, from a man of the tribe of the Amernas, who possessed a dozen, of which he took the greatest care. He detailed their virtues, and the mode of their use. On returning to Gabes, M. de Chevarrier spoke of the remedy to a very intelligent Arab, who confirmed the statements, and said that the remedy was described in the Arab treatises on medicine. They state that a piece of the insect, the size of a grain of corn, given in a piece of meat, will prevent hydrophobia if given within twenty days of the

bite. The strongly irritant property of the insect renders a stronger dose dangerous to life. Even that quantity occasions frightful colics. The Arabs were unanimous as to the efficacy of the remedy.

THE LOCAL GOVERNMENT BOARD (IRELAND).

A LIVELY conversation took place in the House of Commons, in Committee of Supply on the Irish Estimates, with respect to the Local Government Board (Ireland). Mr. Meldon drew attention to the insufficiency of the number of medical inspectors attached to that Board. Mr. Gray held that the Board was in a bad way altogether, and moved a reduction of the vote for it by the omission of the amount of the salaries of the Commissioners; and Mr. Meldon, supported by Mr. Parnell, asked for an inquiry into the Board's administration. Nothing came of the conversation, however. The Government were unyielding as to the question of medical inspectors, and the Local Government Board was decently whitewashed by Sir M. Hicks Beach. Both questions, we apprehend, will appear in the House again next session.

DECOMPOSITION OF STARCH.

MM. MUSCULUS and GRUHN, in a communication made to the Académie des Sciences (June 10th, 1878), give a list of the different substances produced when starch is acted upon simultaneously by diastase and boiling diluted sulphuric acid, with an account of the properties of each. The bodies formed are named soluble starch, erythrodextrine, achroodextrine α, achroodextrine β, achroodextrine γ, maltose, and glycose. The authors of the paper consider starch to be a polysaccharide having the formula $n(C_{12}H_{20}O_{10})$, in which the precise value of n—probably not less than 5 or 6—remains to be determined. Under the influence of diastaltic ferments and diluted acids, starch undergoes a series of hydrations and successive decompositions. At each disintegration it forms maltose and a new dextrine with feebler molecular weight; n becomes less and less, until achroodextrine γ is formed, which is probably transformed into maltose by simple hydration. Maltose in its turn takes up water and decomposes into two molecules of glycose, represented by the equation $C_{12}H_{22}O_{11} + H_2O$ (maltose) = $2(C_6H_{12}O_6)$ glucose.

VITAL STATISTICS OF INDIA.

WE have received from the Office of the Sanitary Commissioners of the Punjaub the weekly return of deaths registered in the province during the week ending the 4th of May. No deaths from cholera occurred; 1356 from small-pox were registered, as against 1311 in the previous week. A total of 5086 deaths were registered under the head of fevers, as against 4670 in the previous week, and nine are reported to have occurred from starvation. In the fifty-one large municipal towns 981 were registered, giving a death-rate of 37 per 1000 of population, the birth-rate during the same interval being at the rate of 31 per 1000. The above figures deal with a total estimated population of about 1,300,000 persons.

THE OPHTHALMIC HOSPITAL, ST. PETERSBURG.

THE following is a summary return of the work done at the Ophthalmic Hospital, St. Petersburg, in 1877. The admissions numbered 13,036 (7286 males and 5750 females). Of these patients 6397 were treated gratuitously, and 6639 paid for their treatment. The total number of patients treated at the hospital (out-patients and in-patients) was 35,281. The number of important operations performed, 1388. The receipts of the hospital in gifts amounted to 20,651 roubles; the expenses to 20,634 roubles. The hospital has an inalienable capital of 1071 roubles, and a reserve capital of 13,050 roubles. On the 1st January, 1878, the balance to the credit of the hospital was 16 roubles.

A MEETING of members of the Surgical Society of Ireland was held in the College of Surgeons on the 19th inst. to consider its financial position, the Council of the College having in May last passed a resolution requesting that the Surgical Society should pay some of its expenses. As the members pay no subscription, the cost of the various meetings has been defrayed by the College authorities, who now very justly require that to a certain extent the Society should be self-supporting. A committee has been appointed to report on the matter, but it is probable that a small yearly subscription by each member will eventually be adopted as the most feasible proceeding under the circumstances.

HONOURS still fall pretty thick upon the medical men who served in the Russian army during the war. Dr. Rasbiraiew, physician to the 9th Army Corps, and Dr. Bergmann, formerly a professor in the University of Dorpat, have recently received the 1st class of the Order of St. Stanislaus; and Drs. Arkhangelsky, physician to the 31st Infantry Division, Dyloosky, physician to the 5th Infantry Division, and Veschitsky, principal physician to the 18th Regiment of Infantry of Vologda (H.R.H. the Prince of Orange's regiment), have received the 3rd class of the Order of St. Vladimir with the Swords.

THE Port Sanitary Committee of the Corporation of London made their annual inspection on Friday, the 19th instant, under the guidance of Mr. William Blankley, the chairman. The Committee were accompanied, among others, by Dr. Seaton, medical officer, and Mr. Netten Radcliffe, inspector of the Local Government Board; Mr. Johnson Smith; Dr. Saunders; Mr. Harry Leach, port medical officer; and Mr. Whitcombe, surgeon to the hospital-ship *Rhin*. The committee subsequently entertained their guests at the Rosherville Hotel.

THE operations of the Russian Red Cross Society do not cease with the cessation of war. The Russian journals give the details of a large quantity of articles sent from the central depôt of the Society to Sebastopol for the service of the hospitals organised in that city for sick from the Army of the South. The articles included mattress-cases, pillow-cases, body linen, under-clothing, stockings, handkerchiefs, down pillows, dressing-gowns, coverlets, bed-curtains, preserved fruits, particularly cranberries, tea, sugar, wine, cocoa, tobacco, books (700), and concertinas (2).

SEVERAL soldiers belonging to Indian regiments have been poisoned at Malta by carbolic acid, given out as a ration instead of lime-juice. Colonel Stanley, in reply to Mr. Muntz, in the House on Monday, has promised that a searching investigation shall be made as to the matter. We would ask, however, why is a ration of lime-juice necessary at Malta at all? Is vegetable food so scarce on that island as to render such an arrangement imperative?

THE *Graphic* this week publishes a supplement giving a pleasant summary of the career of the Earl of Beaconsfield, K.G., appropriately illustrated by well executed portraits of the present Prime Minister as he appeared when making his maiden speech in the House of Commons in 1837, and in his most recent photographs.

THE Blackheath Dramatic Club, some few days ago, presented, through Mr. Charles Davis, the very handsome donation of £75 to the *Dreadnought* Seamen's Hospital, being a portion of the proceeds of an entertainment given by the members of the Club.

ABSTRACT OF SIX LECTURES
ON THE

DIAGNOSIS AND SURGICAL TREATMENT OF ABDOMINAL TUMOURS.

Delivered at the Royal College of Surgeons,

By T. SPENCER WELLS, F.R.C.S.,
HUNTERIAN PROFESSOR OF SURGERY AND PATHOLOGY.

IN the sixth lecture (delivered on June 21st) Mr. Wells continued his computation of the amount of life saved by ovariotomy in his own practice and by other operators. He then entered upon the question of antiseptics in abdominal surgery, and as this is one of the most pressing questions of the day, we quote his concluding remarks. He said—"I believe that I or any surgeon present who wishes conscientiously to protect his patient from any of the atmospheric or other impurities which may possibly affect her injuriously, whether he uses carbolic acid or any other antiseptic, may, by careful attention, do so as completely and thoroughly as the most accurate experimenter can desire. Feeling all this, and feeling also that undue faith in the system may lead to rash practice and the attempt to do things which had better be left alone, and knowing also how difficult it is to obtain any trustworthy statistical comparative facts to determine the relative success of any operation well performed, with and without antiseptic precautions—all other things being equal—I think what I have said of my own observations, although they only amount to twenty-two cases, may have some little value. I shall certainly continue the trial until I arrive at some conclusion one way or the other; and I think I have already noticed a considerable difference in the progress of cases after operation since I began to use carbolic acid and thymol. There has distinctly been less elevation of temperature in every one of the cases than I have ever, or only exceptionally, seen before. Even when patients recovered well, there was generally a rise of temperature to 101·2° or 3° F., and more or less continued cooling of the head required to prevent a further rise. But, in some of the cases treated antiseptically, recovery has been obtained with scarcely any elevation, 100° to 101° being the extreme. I may say that, in antiseptic ovariotomy, fever is the exception, whereas formerly it was the rule. If this experience should hereafter be confirmed by further observations, it would certainly be a very strong argument in favour of the universal adoption of the antiseptic system in ovariotomy, and the experience in Germany does bear out this view. A few days ago, I received a letter from Dr. Olshausen, of Halle, giving me the results of his own practice and those of Esmarch, Hegar, and Schroeder, with and without antiseptics. Without, there were sixty-five cases and thirty-three deaths—more than one-half; while antiseptically, of one hundred and fifty-five cases, there were only thirty-three deaths, or scarcely more than one-fifth. Considering that these are the results obtained by the same operators in the same operation, and that the operators are all convinced that the greater success is mainly due to the use of antiseptics, it would be quite impossible to ignore, and very wrong to undervalue, the importance of such an array of facts. Opponents might, perhaps, explain them away; but we are not here either as opponents or as advocates. All we desire is to arrive at the truth, and to do the best that can possibly be done for every patient entrusted to our care. As far as the inquiry has hitherto extended, the results would encourage us to continue it carefully, but without being seduced into the extravagances of some whose faith in carbolic acid knows no bounds. I have been told of one surgeon who hardly ever thinks of washing his sponges. He throws them into a solution of carbolic acid, with complete confidence that whatever poison they may contain will be neutralised or destroyed. I have no objection to a little extra precaution. I am quite ready to put a clean sponge into carbolised water; but I like to know that it *is* clean before I put it in. I have more than once said, 'This sponge had better be burned,' and the reply has been, 'Put it in one-to-twenty'; and more than once, noticing an unpleasant odour in the ward, I have suggested more cleanliness and ventilation, and have been met by the answer, 'Oh, there is plenty of carbolic acid.' Only two days ago one of the most distinguished of the rising surgeons of the day told me that he had gone straight from a post-mortem examination to operate for strangulated hernia, quite confident that the spray and washing the hands with carbolised water would make him safe. Another, to whom I was showing the rounded trays in which I place my instruments, so formed that no deposit can rest in the angles, said, 'Oh, I do not think that matters; one-in-twenty makes all safe." This undue confidence in antiseptics may lead to danger rather than safety, and so far I see no reason for altering the opinion I publicly expressed at Manchester last year, that 'for my part I would rather operate in a clean, quiet, well-warmed, and well-ventilated building, be it large or small, without any antiseptic precautions, than run the risk of trusting to the neutralising or destructive power of chlorine or iodine, sulphur or tar, borax or the permanganates, salicylic or any other acid, in a place tainted by the presence of sewer-gas, or the seeds of some infectious or contagious disease.' While ready and anxious to adopt any improvement, neglecting nothing likely to add to the safety of the patients who are confided to our care, we must not be led away by overweening confidence in any antiseptics to omit any of those precautions which experience has proved to be necessary, and we must be quite as cautious against the introduction of any contagious disease as we were before endeavouring to ascertain whether antiseptics will give us additional security. In a word, let us regard the antiseptic treatment not as a substitute for those measures which have already proved effectual, but as an additional safeguard. Time and further experience alone can show what the value of this hoped-for additional security may be. That it will prove to be of real and very great value I hope and believe. Experience, daily accumulating, encourages the hope and strengthens the belief."

In the remainder of the lecture Mr. Wells discussed the surgical treatment of uterine tumours. He gave the results of all his cases of removal of fibroid tumours of the uterus, entirely or in part; and of incisions made as explorations. He also described Freund's operations for the entire removal of a cancerous uterus, and concluded the course by a hearty acknowledgment of McDowell, of Kentucky, as the "Father of Ovariotomy."

MORTALITY IN METROPOLITAN PAUPER SCHOOLS.

(Concluded from p. 89.)

IT is now desirable to consider the average annual rate of mortality prevailing during these three years in each of the sixteen metropolitan pauper schools. The average number of inmates, however, varies so considerably, that in some of the schools it is almost too small to serve as a trustworthy basis for mortality statistics. The South Metropolitan at Sutton is the largest of these pauper schools, and the average annual number of its inmates in the three years 1875-6-7 was 1552. The Central London School at Hanwell had an average annual number of 1275 inmates in the same period. The average annual number of inmates of the fourteen other schools ranged downwards from 882 in the North Surrey School at Anerly, to 294, 235, and 135 respectively in the Mile-end Old Town, Islington, and Westminster Schools.

The average annual rates of mortality in the three largest District Schools in the three years were as follow: 7·5 per 1000 in the South Metropolitan, 9·7 in the Central London, and only 4·5 in the North Surrey. The low rate in the North Surrey School is probably due to the fact that the children are derived from the extra-municipal portion of the county of Surrey, and might be expected to show a superior physical condition and a lower death-rate than the pauper children derived from the metropolis. It is worthy of note, however, that in these three largest district pauper schools, with 3649 average annual inmates, the 83 deaths in the three years were equal to an average death-rate of 7·7 per 1000 per annum; this was slightly below the normal rate of mortality in these three schools, which is 7·8 per 1000, calcu-

lated with due regard to the precise age-distribution of their inmates. In the thirteen other schools having average annual numbers of imates ranging between 646 and 135, and amounting in the aggregate to 5158, the deaths in the three years were 254, and were equal to an annual rate of no less than 16·4 per 1000, or considerably more than double the rate prevailing during the same period in the three largest schools.

The two next schools on the list, in the order of size, are the Whitechapel and Poplar, at Forest-gate, and the West London, at Ashford, near Staines. The rates of mortality at these two schools form a striking contrast to the rates in the three larger schools before mentioned. The average annual rate at the Forest-gate school was equal to 19·6, and in the West London School to 20·5 per 1000 of the inmates, which averaged 646 and 634 respectively during the period. The numbers of inmates seem small, but they represent in the two schools nearly four thousand years of life, with a rate of mortality of 20 per 1000, which is nearly three times as high as the average rate in the three largest schools. Is it not reasonable, and even necessary, to inquire why this should be? During the five years 1873–77 (the school has scarcely existed longer) the death-rate in the West London School at Ashford has averaged 19·3 per 1000. It may be stated that the age-distribution of the children in this school is somewhat more favourable to the rate of mortality than is the average distribution in the sixteen schools; hence the normal death-rate is less than 8·1 per 1000, instead of 19·3, actually recorded. The death-rate in this institution would be high if the inmates included a fair proportion of infants and old people. What, therefore, can be said of the rate when it is borne in mind that they consist almost exclusively of children aged between three and fifteen years?

The next four schools on the list are the St. Pancras at Leavesden, the Hackney and Shoreditch at Brentwood, the Holborn at Mitcham, and the Strand at Edmonton. The average inmates of these four schools during the three years was 503, 456, 440, and 395; and the average annual rate of mortality in the same period was 11·0 per 1000 in the Strand School, 13·2 in the St. Pancras School, 13·6 in the Holborn School, and 18·3 in the Hackney and Shoreditch School. There is nothing in the age-distribution of the children in these schools to account for these high rates of mortality; indeed, the proportions at the different groups of ages are more favourable to the normal rate of mortality than the average proportions in the sixteen schools. The death-rate in the Bethnal-green School at Leyton is comparatively low, and did not average more than 6·9 per 1000 during the three years among the inmates, which averaged 386, equal to 1158 years of life.

The most unfavourable mortality return for the three years is presented by the Marylebone Schools at Southall. The average number of inmates of these schools during the three years was 361, and the 42 deaths during the period were equal to an annual rate of 42·4 per 1000. The age-constitution of the inmates differs from that of the other schools, inasmuch as 17 per cent. are aged less than five years, whereas the average proportion of children under this age in the sixteen schools does not exceed 7·7 per cent. After due allowance for the exceptional age-distribution of the children in this school, the normal death-rate of the inmates is, however, but slightly over 10 per 1000, instead of 8·1, the normal rate for the aggregate population of the sixteen schools. It is evident, therefore, that only a small proportion of the excessive rate of mortality in these schools can be attributed to the large proportion of infants among the inmates. The contrast between the rate of mortality at the Southall School, even compared with the excessive rates in other pauper schools, is sufficiently marked to call for investigation.

The average inmates of the Lambeth Schools at Norwood, St. George-in-the-East Schools at Plashet, and the Mile-end Old Town Schools in Mile-end Old Town, were respectively 358, 315, and 294 during the three years under notice, and the annual rate of mortality during the period equal to 11·2 per 1000 among the Lambeth children, 15·9 among the St. George-in-the-East children,[1] and 17·0 among the Mile-end Old Town children. Thus the average annual rate in these three schools was 14·5 per 1000, or 1·7 per 1000 in excess of the average rate in the sixteen schools, and 6·4 above the normal death-rate.

It only remains to say a word or two with regard to the Islington Workhouse School and the Westminster School at Battersea, the average inmates of which in the three years were but 235 and 135 respectively. In the Islington school the annual death-rate in the three years did not exceed 5·7 per 1000, but we doubt whether these figures correctly represent the true death-rate, as cases of infectious diseases are removed for treatment to the Metropolitan Asylum Board Hospitals; and although no statistics are available as to the causes of deaths in pauper schools, a large proportion is undoubtedly due to the infectious diseases mainly fatal among children. The figures relating to the Westminster School at Battersea are too small to give much value to the low death-rate among the inmates, 2·5 per 1000.

Having thus completed a brief notice of the three years' mortality statistics for the sixteen schools, their examination naturally suggests a few general and concluding remarks. It is scarcely necessary to say that, apart from the high rate of mortality recently prevailing in these schools, which calls for investigation, it would not be easy to over-rate the value of simple and uniform statistics of health, disease, and mortality among pauper school children. Such statistics would be equally valuable from a medical and sanitary point of view, and are absolutely necessary in order to test the effect of management, diet, &c., on the health of the children.

We have stated that at the present time about ten thousand metropolitan pauper children are being educated in the various district and other pauper schools, and the number in the whole of England and Wales is probably little short of 35,000, aged mainly between three and fifteen years. The vital statistics of this large number of children, most of whom are under daily observation in special institutions, would form an invaluable contribution to sanitary literature. For the compilation of these statistics the returns from the superintendents or medical officers of the various schools need not be of a complicated or onerous character. Once a year it would be necessary to have a return of the inmates, specifying the number at each year of age. In addition to this a monthly return should show the number of each sex on the first day of the month, the number of admissions, discharges, and of deaths during the month. Each monthly return should show the sex, age, and certified cause of death of each deceased child; and also a few simple statistics of sickness. From these materials an annual report of the health and mortality statistics of the children in our pauper schools could be prepared, with a moderate expenditure of time and labour, which would have a well-defined public value.

Want of statistics on the subject leaves us at present in the dark as to what the rate of mortality among the children in our pauper schools should be. The foregoing figures have indeed shown that in the metropolitan pauper schools the death-rate during the past three years shows a remarkable excess upon the rate prevailing among English children at similar ages, whether compared with the English Life Table rates, with the average rates in the same three years in England and Wales and in London, or with the rates among the population living in the East districts of London, which, consisting as it does principally of the poorest working classes, suffers from a higher death-rate at all ages than prevails in other parts of London. It may be urged that the pauper inmates of our workhouse and district schools are of the lowest physical type, and that the high rate of mortality to which they are liable is the natural result of hereditary tendency to disease, and of the low standard of their health and constitution. That these unfavourable conditions exist, and have an undoubted effect upon the mortality statistics, is obvious, and trustworthy vital statistics of this population would throw much valuable light upon this interesting and important question. It is equally obvious, however, that the children, once domiciled in these institutions, enjoy advantages of housing, clothing, diet, and of general and medical treatment, which the average child in the working classes cannot enjoy. Then comes the question, how far the present advantages of these children counteract the disadvantages they suffered previous to admission, and their hereditary defects of constitution. In short, should the death-rate among children in our pauper schools exceed

[1] The medical officer of these schools has informed us that the deaths of children occurring therein during the three years were 12, and not 15, as shown in the table last week. With this number of deaths the annual rate of mortality would be reduced from 15·9 to 12·7 per 1000. It would appear that the Registrar-General, in his "deaths in institutions," includes those of resident nurses and attendants, which may account for this difference.

the rate among the children of the working classes living in the crowded districts of our large towns? The facts before given for these sixteen schools appear inevitably to suggest a negative answer to this question. It has been pointed out that in the three largest of the district schools, the South Metropolitan, the Central London, and the North Surrey, the average annual rate of mortality did not exceed 7·7 per 1000 during the three years under notice, while in the thirteen other schools the annual death-rate in the same period was equal to 16·4 per 1000. In order to establish the assertion that the high rate of mortality among children in pauper schools is due to their inherited low physical condition, it would be necessary to supply some satisfactory explanation of the wide variations between the death-rates prevailing in the different schools; and it is difficult to believe that the low death-rates prevailing in the Central London and South Metropolitan schools can be due to the superior constitutions of the pauper children received from those parts of the metropolis, whatever may be the cause of the low rate of mortality among the extra-metropolitan children of the North Surrey district. Each of these schools has a medical officer, at salaries ranging from £60 to £300 per annum; and it is impossible to doubt that the reports of some of these officers contain valuable information relating to the health, diet, and general treatment of the children in these schools. No such reports, however, are available to the public.

It may be hoped that a sufficient plea has been urged for further information on the subject of the health and mortality of the children in our pauper schools. The few facts here produced, which are necessarily imperfect, do little more than to show how little we know on the subject, but that little is sufficient to prove that we ought to know a good deal more.

THE WEATHER AT WIMBLEDON.

MR. J. H. STEWARD sends from his tent at Wimbledon Camp the following Meteorological Report of the Meeting 1878.

Date.	Barometer reduced to sea level and 32° F.	Maximum temperature in the sun.	Maximum temperature in the shade.	Minimum temperature.	Wet bulb thermometer.	Dry bulb thermometer.	Rainfall.	Direction of wind.	Velocity of wind. (Miles per hour.)	Remarks with reference to recording barometer.
	Degrees.	Degrees.	Degrees.	Degrees.	Degrees.	Degrees.	Inches.			
July 8th	30·12	138	73	55	60	69	..	N.E.	..	.. .. ..
„ 9th	30·05	136	74	51	62	71	..	W.S.W.	17	For the last 6 hours the barometer has been slowly falling.
„ 10th	29·93	112	65	52	56	64	·06	N.W.	12	For the past 12 hours atmospheric pressure has been perfectly even.
„ 11th	29·90	114	64	51	58	64	Slight.	N.W.	12	Barometer very steady, with an inclination to fall.
„ 12th	29·77	115	67	53	58	66	..	N.W.	5½	Barometer very steady; slight rise since 7 o'clock this morning.
„ 13th	29·98	137	71	56	59	71	·08	N.	6½	Barometer very steady, with an inclination to rise.
„ 14th	30·10	120	73	39	60	69	..	N.	7½	Barometer slightly rising.
„ 15th	30·13	120	68	55	60	65	..	N.W.	8½	Atmospheric pressure steady.
„ 16th	30·30	138	76	62	64	73	..	N.W.	9	Barometer slightly rising.
„ 17th	30·30	144	80	61	69	81	..	N.W.	9	Atmospheric pressure for the past 24 hours has been perfectly even.
„ 18th	30·33	149	83	60	71	82	..	N.W.	4½	Atmospheric pressure quite steady since 10 o'clock this morning.
„ 19th	30·24	145	84	59	70	84	..	E.	8½	Atmospheric pressure very steady, with a slight tendency to fall.
„ 20th	30·14	150	81	56	68	81	..	N.E.	12	Barometer steady, with an inclination to fall.

THE PARIS EXHIBITION.

(By our Paris Correspondent.)

III.—THE BRITISH SECTION.

THANKS to the active exercise of Royal patronage, to the untiring activity and wonderful capacities of the Secretary of the Commission, Mr. Philip Cunliffe Owen, to the energy of all concerned in the work—exhibitors, commissioners, and officials,—the British department was the first ready in the Exhibition, and maintains its foremost rank in this great gathering of nations. England can be proud of her section, and feel that "every man has done his duty." Not only in the excellence and novelty of the products exhibited, but in the vast space it occupies, the variety of its arrangements and annexes, the power and the riches it evinces, the British section is a great and acknowledged success.

Whether we turn to the grand gallery of machines and its annexes outside the Palace, or to the agricultural, horticultural, and maritime displays on the banks of the Seine and the Esplanade des Invalides, or to the treasures of industry gathered in every gallery of the Champs de Mars, or to the wonderful pictures which form one of the great attractions of this Exhibition and have quite taken the Continental nations by surprise, or to the picturesque collections and trophies of Canada, Australia, India, and the Colonies, we find documents of the will and intellects of a race that has upturned fields, explored the deepest recesses of earth and waters, spread over seas and lands, invented giant contrivances whilst cultivating the refined aspects of things, and everywhere manifested its great and conquering spirit.

It would be impossible, in a short article, to give a satisfactory idea of such a vast and varied exhibition. I shall therefore devote more than one notice to the different galleries of the Champs de Mars and its external annexes, and to begin with, I cannot do better than take your readers through the group more especially connected with the medical sciences. I mean Group II.

The first thing that strikes our eyes in Class 4 of this group are the cases of Messrs. Mayer and Meltzer, the well-known surgical instrument makers of London, and of Messrs. Joseph Gray and Co., the great Sheffield manufacturers. These are the only two that have exhibited surgical instruments in the British section; but fortunately their exhibition is such as to maintain the reputation of England for surgical cutlery.

In the case of Messrs. Mayer and Meltzer is to be seen their novel amputating case, looking very small and compact, and yet very complete. The amputating-saw has various blades adapted to it. The amputating-knife is very light, and though made short, so as to suit the comparative smallness of the box, seems quite long and powerful enough. The pouch for lint, &c., is very convenient. Their pocket-case for testing urine is also remarkably compact and convenient. It is made to contain the standing tubes, the spirit-lamp, the various liquids for testing, &c., and yet can be quickly mounted and dismounted, and slipped into the pocket. Another very convenient and handy case is one for the throat, containing four phials for liquids, and two brushes which can be mounted and dismounted. Amongst

the various novelties which they exhibit, Messrs. Mayer and Meltzer are particularly interested in an instrument for dilating the nose, made of three blades, like a vaginal speculum, and which can be fixed in position; and a movable forceps, which I admired very much. The latter has two levers moving a centre-piece, so as to extend or draw it back; and it has also a tube consisting of a spiral spring, and a shaft made of flexible copper, so as to bend it to any angle or direction. I need not insist on the merits and applications of this ingenious little contrivance. Messrs. Mayer and Meltzer also showed me in their case an instrument used for perforating the tympanum. The instrument is so contrived with a pouch as to have its air exhausted by means of an accompanying aspirator. The end is then applied, and when a tap is turned the air rushes in and the tympanum is perforated. They have a very small contrivance containing the wherewith for a subcutaneous injection in a miniature nickel tube. They show Aveling's needle for vesico-vaginal fistula, and also his repositor for incision of the uterus, with its pelvi-perineal band, which allows the cup to be thrust against the fundus of the uterus in a line with the axis of the pelvic brim. The pressure is exerted by four elastic rings, which are fastened by tapes to a belt, which is kept up by braces over the shoulders. They have modifications of Professor Lister's spray, with an improvement for allowing the introduction of the required amount of water and the replenishing of the instrument. Of course they have not neglected to exhibit their well-known batteries, at once constant and interrupted, excited by sulphate of copper, and which are so very handy, the only inconvenience appearing to be that all the surgeon's resources in electricity are lost if the battery is out of order. But Messrs. Mayer and Meltzer seem exceedingly certain of their duration and effects, and showed me a fine portable apparatus of 100 cells, which they guaranteed would work a year without recharging. I pass over the minor, though interesting instruments, the surgical pocket-cases, the usual specimens of cutlery, &c., which compose this very fine case, and which are worth inspection, together with the more novel instruments I have just described.

The case exhibited by Messrs. Joseph Gray and Co., of Sheffield, is most strikingly attractive and very interesting and complete. All the instruments employed for veterinary and dental purposes, their amputating cases, their forceps and other obstetric instruments, their magneto-electric machines, are arranged in brilliant and tasteful array. I shall not dwell on the magnificent dental-surgery instruments, with their ivory handles, though these seem as convenient to hold as they are pleasant to look at; nor on the very brilliant magneto-electric machine which they have constructed, with its special indicator, for the Exhibition. But I wish to point out the neat finish and polish of their instruments, with which all who examine their case are struck. Whether we look at the cheap magneto-electric machines, so convenient to the public, the collection of bandages, hypogastric belts and trusses, the dental and veterinary instruments, the forceps, speculums and irrigators, &c., that come from the house of these very important manufacturers, everything seems neat, finished, and reliable. The indicator added to the electro-magnetic machines seems a very useful improvement, and it increases the price of the instrument only very slightly. The amputating cases are very complete, and the cases for dental surgeons remarkably well got up. I pass over very many other interesting details, such as bougies and sounds, surgeons' pocket-cases, &c.; but I can only repeat that in its character of general surgical appliances, &c., manufactured on a large scale, I see no other display in the Exhibition to surpass this.

Messrs. Rein and Son, of London, makers of acoustic instruments for deafness, have exhibited a complete arrangement of the various apparatus which they have contrived for this infirmity, and which they alter or combine so as to meet the various requirements of a deaf person in society. They have a *ne plus ultra* or elastic tube of mixed metal with a trumpet, combined for sound by Messrs. Rein, and which they apply to all hearing purposes with various modifications. Their conversational tubes for whispering are very efficacious. They measure more than six yards from end to end, for any degree of distance. There are also tubes with three or more branches according to the number of people at table. Again, there is a tube for one person with several sound conductors arranged in the form of a basket of fruit or flowers, which can be put on a table and collect the general conversation. There are contrivances for the railway, the church, the theatre, &c.,—in fact, every requirement and social comfort of the deaf seems to have been studied with especial solicitude by this exhibitor. Messrs. Rein more especially exhibit various elastic stockings and conveniences, amongst which is to be noticed a breast protector, which certainly is worthy of commendation. It is very nicely adapted for ladies with tender breasts, or after the breast has been removed, and this latter application has struck the attention of the different surgeons who have examined Messrs. Rein's contrivance. It seems very successful in preventing the pressure of the clothes and protecting the breast in other respects, and consequently is a good hygienic acquisition.

Surgeon-Major J. H. Porter, Assistant Professor of Military Surgery at the Army Medical School of Netley, is very successful in this portion of the Exhibition with his extemporised splints made of telegraph-wire and pieces of a newspaper or a soldier's tunic. The medical visitors to the Exhibition are very much pleased with these simple, neat, and ingenious appliances. All that is requisite is a piece of telegraph-wire, some cord, and a piece of cloth or paper, and a splint may be made which can be applied to the finger, the elbow, inside arm, outside arm, the leg, &c. Surgeon-Major Porter has also shown his Surgeon's Pocket-book—a useful accompaniment to the splints, and also a model of a passenger's railway luggage-van, representing a method of carrying sick or wounded in skin hammocks, twine hammocks, &c. It consists mainly of two posts fixed in the luggage-van, with the hammocks suspended between them. If I am not mistaken, a third model or exhibit—one of a hill dhooley—is also shown by the same exhibitor. It is for the transport of sick or wounded in a recumbent position in mountainous districts. The advantages claimed for this mode of conveyance are—first, that the recumbent position can be maintained throughout the march; secondly, that on the line of march a patient need never be shifted; thirdly, that the cot answers the purpose of a bed at night; fourthly, that a less number of men is required for its carriage than any other form of conveyance admitting of a recumbent position.

LIGATURE OF EXTERNAL ILIAC ARTERY.

To the Editor of THE LANCET.

SIR,—The patient whose external iliac artery was tied by me on the 17th inst. has been progressing satisfactorily during the week. He has had no surgical fever, the temperature never having reached 100°, and the pulse having ranged between 72 and 82. The temperature of the limb, which was 95·6° the day after the operation, is now normal. The wound is suppurating, notwithstanding most careful attention to the antiseptic dressings.

I remain, Sir, yours most obediently,

W. SPENCER WATSON.

Henrietta-street, Cavendish-square,
July 25th, 1878.

ENCYSTED OVARIAN DROPSY.

To the Editor of THE LANCET.

SIR,—A case of encysted ovarian dropsy was under my treatment for a great number of years, a short history of which may be of interest to the readers of THE LANCET. The case came under my observation twenty years ago. The patient, Margaret W——, was forty-five years of age. Her abdomen had been increasing in size for five or six years. In the year 1860 her suffering was so great from distention that tapping was had recourse to, and from eight to ten quarts of fluid removed. The cyst rapidly refilled, so that the operation had to be repeated three or four times a month for about three years, and about the same quantity of fluid was removed each time. For some five or six years afterwards she was tapped once or twice a month, and up to the year 1875, when she ceased to be under my observation, she was tapped three or four times a year. During the first three years, when tapping was performed almost every week, she was a great sufferer from pain and weakness, so that she would have submitted to anything that could be done for her. Ovariotomy was not so fashionable then as it is now.

Without entering into details, the points of interest appear to me to be the frequency with which the cyst refilled, the number of times tapping was performed in all

(viz., 400), and the fact that she most frequently tapped herself. Having on one occasion, during the years of weekly tapping, left the instrument at her house, by the time of my next visit she had tapped herself, and, as she lived nine miles from my residence, I gave her my *negative* sanction to do so in case the distension became painful, and afterwards she would not live without the instrument in her house, and I believe she has it to this day, and performs the operation herself when required. As the time of tapping became less frequent, her general health improved, so that she was able to go about. I am not aware of many cases on record in which tapping has been performed so many times, and it would be interesting to know if there is any instance in which the patient herself operated. I wish it to be clearly understood that I never gave my unqualified approval of the practice, but explained that she did so on her own responsibility and at her own risk.

Yours truly,

THOS. HUGHES, M.D.

Dinorwic Hospital, Llanberis, July 10th, 1878.

PARLIAMENTARY PROCEEDINGS.

HOUSE OF COMMONS.

Thursday, July 18th.

OXFORD PROFESSORS.

DR. CAMERON asked the Chancellor of the Exchequer whether it was a fact that during the last twelve years the Regius Professor of Medicine at Oxford had not delivered any course of lectures on medicine, and that the Clinical Professor of Medicine had not given any course of clinical instruction; and whether the Government would lay before the House copies of the evidence taken during the present year by the Oxford University Commissioners concerning the present state of the medical faculty of the University of Oxford, and the schemes for its amendment submitted to the Commissioners.

The CHANCELLOR of the EXCHEQUER said Dr. Acland held the office referred to, and he was responsible to the University alone for the duties he was called upon to discharge. The Government had nothing to say on the sub ect. He believed the whole of the information the hon. gentleman desired would be found in a return which was presented to the House some years ago. He understood, however, that the University were entirely satisfied with the manner in which Dr. Acland performed his duties: and he might say, without going out of his way, that certainly there never was anyone more thoroughly devoted to the public service than Dr. Acland. With regard to the publication of the evidence, he understood that the University had not yet come to any decision on the subject.

Obituary.

AUGUSTIN BARBER FRY, M.R.C.S.ENG.

WE record with very deep regret the death from diphtheria of Mr. Augustin Barber Fry, of Harcourt House, York Town, Surrey, at the early age of thirty-five. In addition to the professional relations sustained by Mr. Fry in this neighbourhood, in virtue of which he was greatly esteemed, he was captain of the Landhurst company of the Berks Rifle Volunteers. His funeral was attended by the company, whose feelings towards their late captain may best be gathered from the words of Major Toke, inviting the men to the funeral: "Major Toke is certain that every member of the company feels as he himself does, that he has lost not only a most able and zealous commanding officer, but a true friend and comrade, who, by his great kindness and genial disposition, endeared himself to everyone, and whose untimely and early death will be sorrowfully remembered by everyone." As so often is the case with members of the medical profession, Mr. Fry was associated with all good movements in his neighbourhood. He leaves a widow and four daughters to mourn his loss. If medical men must sometimes die early, and in the discharge of their duties, as seems to have been the case here, it is some mitigation of grief to know that they have died at their post, and carry to the grave the general respect of the community in which they laboured.

THOMAS HENRY THORNE, M.R.C.S., L.S.A.

MANY friends, besides old fellow-students of St. Bartholomew's Hospital, will regret to receive the announcement of Mr. Thorne's death, which took place at Kimberley, Graiqualand West, South Africa, on the 15th of June last. The immediate cause was acute pneumonia, the effects of which were aggravated by cardiac disease of some standing. To great abilities Mr. Thorne added a charm of manner and goodness of heart which endeared him to all who came to know him, and his funeral was the occasion of such a popular demonstration as in the short history of Kimberley had never before been witnessed. He was followed to his grave by the whole of the public and local forces, and the Masons and Odd Fellows in full regalia. A firing party paid him military honours in recognition of the active part he took in the Garibaldian campaign, which resulted in the overthrow of Bourbon rule in Naples. Mr. Thorne leaves a widow and two children.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at meetings of the Court of Examiners on the 23rd and 24th inst.:—

Aitken, E. M'Gruer, Glasgow.
Barton, G. Henry, Market-Rasen.
Birch, R. Charles, Manchester.
Casement, B. Newcombe, M.B. Dub., Ballycastle, Co. Antrim.
Cheetham, W. Henry, Horsforth, Yorkshire.
Child, W. Long, Belsize-park.
Chisholm, J. Merritt, M.B. Ed., Edinburgh.
Clarke, H. Joy, M.B. Ed., Doncaster.
Coleman, G. Edward, L.R.C.P. Ed., Pontefract.
Dixson, Craig, M.B. Ed., Sydney, New South Wales.
Guillemard, B. James, M.B. Ed., Hythe, Southampton.
Handford, Henry, M.B. Ed., Atherstone, Warwickshire.
Jackson, Arthur, L.S.A., Grays, Essex.
Jones, Robert, Liverpool.
Keep, C. Henry, Calcutta.
King, H. William, M.B. Ed., Bury St. Edmunds.
Knox, Charles, L.S.A., Birkenhead.
Langley, P. W. Leslie, M.D. Dub., Waterford.
Leak, Hector, Winsford, Cheshire.
Lloyd, G. Jordan, L.S.A., Birmingham.
Lofthouse, John, Rochdale.
Moore, J. Westwood, Birmingham.
Mouritz, A. Albert, Runcorn, Cheshire.
Newton, R. Arthur, L.S.A., Birmingham.
Nixon, T. Ayrton, Middleborough-on-Tees.
Osborn, W. Henry, Birmingham.
Pughe, T. W. Owen, Liverpool.
Rennie, S. James, Cumberland.
Rowe, G. Herbert, York.
Stone, A. William, Knottingley, Yorkshire.
Swann, Alfred, M.D., L.S.A., Bradford, Yorkshire.
Walter, E. William, L.R.C.P. Ed., Broadstairs.
Wheeler, W. Henry, Clifton, near Bristol.
Williams, M. Melbourne, Chorley, Lancashire.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on July 18th:—

Bennett, Frederick, Linton, Cambridgeshire.
Forsbrook, Wm. Hy. Russell, Westminster Hospital.
Jackson, Arthur, Chadwell, Grays, Essex.
Leadbeater, Thos. Edwd., Bromley.
Magee, John Richard, Bradford, Yorkshire.
May, Thos. Henry, Dover-street, Piccadilly.
Pritchard, Samuel Evan, Beaumaris.

The following gentlemen also passed the Primary Professional Examination:—

Lindeman, Sidney Herbert, St. Bartholomew's Hospital.
Oakeley, John Lewis Bagnall, St. Bartholomew's Hospital.

UNIVERSITY OF DURHAM.—The following name should have been placed in the list of gentlemen who recently passed the examination for the degree of M.B., at the University of Durham:—

Powell, Scudamore K., M.R.C.S., L.S.A.

ROKITANSKY died on Tuesday at Venice.

THE medical men of Aberdeenshire have entertained Mr. John Irvine, M.R.C.S. Eng., of Tarves, at a dinner, in celebration of his having completed fifty years of practice.

JOHN CRANKE, Esq., surgeon, Ulverston, Lancashire, qualified as a magistrate for the county of Lancaster, at the Manchester quarter sessions, on July 12th.

AT the annual meeting of the governors of the Gloucestershire Eye Institution, Gloucester, a resolution was passed for amalgamating it with the infirmary upon terms which had been previously arranged by committees.

THE FRASERBURGH INFIRMARY, with accommodation for 20 beds, erected at the sole cost (£3000) of Mr. Thomas Walker, upon a site given by Lord Saltoun, was formally opened by his lordship on Wednesday, the 17th inst., in the presence of a numerous assemblage of the local gentry and other residents, including Mr. Thomas Walker himself.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly Court of the Directors of the Society was held on Wednesday, July 10th, Sir George Burrows, President, in the chair. A sum of £1253 was granted, to be distributed, according to their circumstances, among 58 widows, 11 orphans, and 3 orphans on the Copeland Fund. The expenses of the quarter amounted to £51 12*s.* 3*d.* Three new members were elected; the deaths of two members were reported. There were no fresh applications for grants.

Medical Appointments.

BARKER, W. H., B.A., M.R.C.S.E., has been appointed Junior Assistant Medical Officer to the Southamptonshire Lunatic Asylum, Knowle, vice Robertson, resigned.

BIRD, J., L.F.P.S.G. & L.M., has been appointed Medical Officer for the B District of the Thrapston Union, vice Morris, resigned.

BLACKER, E. J. L., M.B., L.R.C.S.I., has been appointed Public Vaccinator for the B District of the Thrapston Union, vice Morris, resigned.

BOULTON, A. E., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Horncastle District and the Workhouse of the Horncastle Union, at £78 per annum and fees, and £40 per annum respectively, vice Ward, deceased.

BOWES, W., M.R.C.S.E., L.S.A.L., has been appointed Assistant Medical Officer to the Ipswich Lunatic Asylum, at £100 per annum, furnished apartments, board, &c.

BOYD, S. B., M.D., L.R.C.S.Ed., has been appointed Medical Officer, Public Vaccinator, &c., for the Ballymoney Dispensary District of the Ballymoney Union, co. Antrim, at £120 per annum and fees, and £25 per annum as Medical Officer of Health, vice Latham, resigned.

BRADLEY, C. A., M.R.C.S.E., has been appointed Medical Officer to the Macclesfield Medical Aid Society, vice Lyle, resigned.

COCHRANE, R., L.R.C.P.Ed., L.F.P.S.G., has been appointed Medical Officer and Public Vaccinator for the Parish of Stranraer, Wigtownshire, vice Orgill, deceased.

FORSTER, F., L.R.C.S.I., L.R.C.P.Ed., has been appointed Medical Officer, Public Vaccinator, &c., for the Roadford Dispensary District of the Ennistymon Union, co. Clare, at £100 per annum and fees, and £20 per annum as Medical Officer of Health, vice Ryan, resigned.

HEARD, C. G., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the No. 3 District of the Bridlington Union, Yorkshire, vice Dawson, deceased.

JACKMAN, W. T., M.R.C.S.E., has been appointed Assistant Medical Officer to the Greenwich Union Infirmary, at £100 per annum, board, lodging, &c., vice Bate, appointed to the Royal Navy.

JOLLY, R., M.D., F.R.C.S.Ed., has been appointed Surgeon to the Birmingham Police Force, at £200 per annum, vice Solomon, resigned.

MACDONALD, Mr. D. S., has been appointed House-Surgeon and Apothecary to the Northern Infirmary, Inverness, vice Stuart, resigned.

MOORE, C. I., L.A.H.D., has been appointed Apothecary and Registrar to the Roscommon County Infirmary, vice Parker, resigned.

MORTON, A. C., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Great Yarmouth Hospital, vice Angove, resigned.

MOULLIN, J. A. M., M.B., M.R.C.S.E., L.S.A.L., has been appointed a Physician to the St. Marylebone General Dispensary, and a Surgeon to the Westbourne Provident Dispensary and Maternity.

NEWMAN, J. J., L.R.C.P.L., M.R.C.S.E., has been appointed Resident Medical Officer to the Ramsgate and St. Lawrence Royal Dispensary and Seaman's Infirmary, vice Mason, resigned.

NEWTON, J., M.R.C.S.E., has been appointed a District Surgeon to the Salford and Pendleton Royal Hospital and Dispensary, Manchester, vice Beeley, whose appointment has expired.

POUNTNEY, W. E., M.B., C.M., has been appointed Medical Officer of Health *pro tem.* for the St. Anne's-on-the-Sea Urban Sanitary District.

RAWSON, E. E., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been re-appointed Medical Officer of Health for the Thornton Urban Sanitary District, Yorkshire, until the 29th September, 1879.

REAN, W. H., M.R.C.S.E. &c., of Gunnislake, has been appointed Acting Surgeon to the 5th Cornwall Volunteer Rifles.

RYGATE, B. R., M.B., has been appointed Resident Accoucheur to the London Hospital, vice Fisher, resigned.

THOMPSON, J., B.A., M.D., L.K.Q.C.P.I., M.R.C.S., has been appointed Surgeon to the Police of the Borough of Royal Leamington Spa.

WHITNEY, W. U., M.R.C.S., L.S.A.L., has been appointed Surgeon to Emanuel Hospital and School, vice Burch, deceased.

Births, Marriages, and Deaths.

BIRTHS.

BROWN.—On the 23rd inst., at The Willows, Tredegar, Mon., the wife of George Arthur Brown, of a son.

GILMOUR.—On the 20th inst., at Crays, Duntocher, Dumbartonshire, the wife of Adam Gilmour, M.D., of a daughter.

HEWLETT.—On the 18th inst., the wife of John C. Hewlett, Esq., of The Ferns, Hornsey, and Creechurch-lane, Leadenhall-street, of a daughter.

ILES.—On the 12th inst., at East Gate, Taunton, the wife of Alfred Robert Iles, L.R.C.P.Ed., of a son.

MCDONOUGH.—On the 20th inst., at Church-place, Killarney, the wife of John McDonough, L.K.Q.C.P.I., of a daughter.

MADDEN.—On the 20th inst., at Edgbaston, the wife of Edward M. Madden, M.B., of a daughter.

MOIR.—On the 11th inst., at Union-street, Aberdeen, the wife of Dr. Forbes Fraser Maitland Moir, of a son.

PINDER.—On the 20th inst., at Horsforth, Leeds, the wife of John William Pinder, Esq., L.R.C.P., M.R.C.S., of a daughter.

ROBATHAN.—On the 18th inst., at Prestonville, Brighton, the wife of George B. Robathan, M.R.C.S.E., of a son.

MARRIAGES.

BAIN—ROBINSON.—On the 23rd inst., at the Parish Church, Newark-upon-Trent, by the Rev. Dr. Pearson, LL.D., assisted by the Rev. — Jukes, David Stuart Erskine Bain, M.R.C.S.E. &c., of Mere, Wilts, to Gertrude Mill, daughter of W. Robinson, of Southfield House, Newark-upon-Trent, Notts.

HABGOOD—MUNDIE.—On the 18th inst., at St. Saviour's Church, Eastbourne, Sussex, by the Rev. H. R. Whelpton, M.A., assisted by the Rev. Theo. Wood, M.A., B.D., and the Rev. — Bradford, M.A., Henry Habgood, M.D., M.R.C.S.E., of Sussex House, Bolton-road, Eastbourne, youngest son of the late John Habgood, Esq., of Chewton Mendip, Bath, to Sarah Lizzie, only daughter of George Mundie, Esq., M.D., of Stafford House, Eastbourne.

HARE—ALPE.—On the 11th inst., at St. George's, Hanover-square, R. W. Hare, Surgeon-Major, Army Medical Department, to Alice Blanche, daughter of J. P. Alpe, Esq.

DEATHS.

ASHTON.—On the 18th inst., at Burscough, Ormskirk, Thomas Mather Ashton, M.D., aged 66.

BERESFORD.—On the 18th inst., at The Cottage, Narborough, Leicestershire, after a few hours' illness, James William Beresford, M.R.C.S.E. & L.S.A.L., aged 62.

CAMERON.—On the 19th inst., at Bath, Angus Cameron, M.D., aged 50.

COCKS.—On the 10th inst., at Falmouth, William P. Cocks, Surgeon, aged 87.

COLES.—On the 13th inst., at Rayleigh, Essex, Richard Coles, M.R.C.S.E., aged 45.

DARTNELL.—On the 22nd inst., at Ardenville, Leamington, George Russell Dartnell, M.R.C.S.E., Inspector-General of Hospitals (on half-pay), aged 78.

DOWNEY.—On the 12th inst., at Sileby, Leicestershire, Patrick Downey, L.R.C.S.I., aged 66.

DRIVER.—On the 11th inst., at Cheltenham, William Edwin Driver, M.R.C.S.E., aged 69.

LANE.—On the 6th inst., at Rockfort, Bandon, co. Cork, William Beamish Lane, L.R.C.P.L., aged 39.

LOWDER.—On the 20th inst., at Ryde, Charles D'Oyley John Lowder, M.D., aged 73.

SCOTT.—On the 6th inst., at Lauriston-place, Edinburgh, Alexander Scott, Surgeon, aged 82.

STEEVES.—Drowned at sea, on the 17th inst., Howard Douglas Steeves, Surgeon, aged 28.

THOMPSON.—On the 12th ult., at Banda, India, Philip Thompson, M.R.C.S.E., Surgeon, 20th Madras Native Infantry, aged 30.

THORNE.—On the 15th ult., at Kimberley, Griqualand West, South Africa, Thomas Henry Thorne, M.R.C.S.E., L.S.A.L., aged 38.

TURNER.—On the 18th inst., Ann, the wife of George Turner, of Portsmouth.

WARD.—On the 20th inst., at Upper Norwood, Alexander Ward, M.R.C.S.E., aged 26.

WEBSTER.—On the 20th inst., at Camberwell, Henry Webster, M.R.C.S.E., late Surgeon, Madras Army, aged 46.

WHITWELL.—On the 3rd ult., at Ghazipur, India, N.W.P., Henry Wishart (Sonnie), the dearly-loved son of Dr. and Mrs. Whitwell, aged 3 years and 11 months.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.*]

BOOKS ETC. RECEIVED.

Dr. H. Beigel: Pathologische Anatomie der Weiblichen Unfruchtbarkeit.
C. E. Groves: Miller's Elements of Chemistry.
Dr. J. M. Sims on Cholecystotomy for the Removal of Gall-stones in Dropsy of the Gall-bladder.
Dr. J. J. Kerbert: Respiratory Diseases and Dr. Churchill's Discoveries.
Dr. G. Hilbers on Homœopathy.
W. E. Riordan on Heart Disease and Aneurism in the Army.
Report on the Health of the Borough of Birmingham. 1877.
C. Hunter: Mechanical Dentistry.
G. A. Kuhff: Le Corps Humain. Parts I. and II.
R. A. Proctor: The Moon.
The Magazine of Art. August.

Notes, Short Comments, and Answers to Correspondents.

INFANTILE DIARRHŒA AND WATER-SUPPLY IN LONDON.

DURING the four weeks ending last Saturday the annual death-rate from diarrhœa in London was equal to 2·9 per 1000 persons living, whereas in the nineteen large provincial towns it did not exceed 2·1. Among these nineteen towns diarrhœa fatality during the four weeks showed marked variations; for instance, it was so low as 0·6 in Bristol and 0·8 in Bradford, whereas it was equal to 5·8 and 8·6 per 1000 respectively in Hull and Leicester. During the early part of this annual summer epidemic of infantile diarrhœa the fatality is usually greater in London than in the nineteen provincial towns; but in August and September the fatality in the country towns is greater than in London. Respecting the varying fatality of diarrhœa in different parts of London and its causation, the Registrar-General in his last Weekly Return states a few facts, the true bearings of which are at least worthy of investigation. We are told that diarrhœa "becomes fatal in London when the temperature of the Thames rises much above 60°." Does this mean more than that heat is the most powerful agent in the causation of infantile diarrhœa? It is certain that the fatality this year followed closely upon the high temperature of the week ending 29th June, when the mean temperature was 70·7°, and the lower temperature of the two following weeks (when the mean fell to 60·1° and 61·9°) scarcely checked the rapid increase in the fatality of diarrhœa. It may be noted, however, that, although the mean temperature of the air fell below the average during the two weeks ending 13th instant, the mean temperature of the water of the Thames was equal to 67·9° and 66·1°, and was higher than in the preceding week. The Registrar-General appears to suggest this explanation of the increased diarrhœa fatality. We last week called attention to the high temperature of the river waters delivered by the London Water Companies during the summer, and we now find the Registrar-General alluding to the low rate of fatality from diarrhœa within the area of the Kent Water Company, which draws its supply from deep wells in the chalk. During the four weeks ending 20th instant the annual death-rate from diarrhœa within the Kent Company's area (which includes, among other places, Greenwich, Deptford, Woolwich, Plumstead, and Charlton) did not exceed 1·1 per 1000; whereas it averaged 3·1 in the rest of London, supplied by the Companies drawing their waters mainly from the rivers Thames and Lea. Without prejudging the case, any facts that appear to throw light upon the causes of the local variations in the rate of mortality from infantile diarrhœa deserve the fullest consideration.

M.R.C.S. Eng.—We cannot tell why. It is done in contravention of the bye-laws of the College of Physicians.

HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—Hydrophobia literature has become as fashionable as the disease is common at this season, "high and low, rich and poor," each contributing his modicum for the public weal. But, after all, we are not much better now than fifty years ago, and suggestions are not altogether to be despised. It is highly probable that the case treated by wourali by Dr. Hunter in your current number would have recovered had the dosage (the absence of which Dr. H. refers to) been a certainty, and it is to be hoped some manufacturing chemist will produce a trustworthy preparation ere long. Dr. Hunter's letter is suggestive, and it has suggested to me a parallel treatment, having the matter of dose fixed and unerring—a desideratum. My idea is that in nicotine we have as violent a sedative as wourali poison is reputed to be, and I conceive the best mode of administration would be to suspend it in sherry, conveying it to the back of the pharynx by a tube if necessary. Hypodermically, I fear it will never answer. It seems a justification to say that wourali kills by paralysing the muscles of respiration. I gather this from Dr. Hunter's patient having "expired with a deep sigh," though death may have been due to the natural course of the disease. Nicotine, on the contrary, when it destroys life, does so by implicating both the vascular and nervous system, and would, therefore, seem more suitable in a hydrophobia case. Tobacco has been given with various results; but its active principle (which I am here advocating), to the exclusion of its other parts, has never to my knowledge been put to the test of experience. No matter what drug or agent we resort to to combat the toxæmia of rabies in man, local treatment is essential the instant the bite is inflicted, though worthless, in my humble judgment, after a single round of the circulation even; for this reason, that but one circuit is needed to contaminate the whole blood, and to convey it to every part of the economy. Were I an authority I should put down the occurrence of hydrophobia days or weeks after infliction of the bite to a theory I hold, that the saliva of a mad dog having been inoculated into the human subject, there is a period of latency varying in different individuals, during which the virus is setting up a quasi-fermentation action in the whole mass of the blood until the fermentation process has attained its acme; then the smallest exciting cause, as a chill &c., is sufficient to evoke the disease. This view of the pathology of hydrophobia may not be accepted; but it is quite on a par with the nothingness which the *sewans* of medical science have advanced in a confessedly very obscure subject. Nevertheless, it is to be taken for what it is worth as the impression (original I believe) of,

Your obedient servant,

Lairs, July 21st, 1878. H. KIERNANDER, L.R.C.S. Ed., &c.

TESTIMONIAL TO MR. A. B. STIRLING.

IT is a common practice to make light of testimonials; but there are few men who would not feel proud to receive such a tribute as was conveyed to Mr. A. B. Stirling, Assistant-Curator of the Anatomical Museum in the University of Edinburgh on the 18th inst. The formal testimonial took the shape of 500 guineas, and a microscope of the value of 50 guineas. But the value of the proceeding was in the number and character of the promoters, including the principal professors and graduates of Edinburgh, and in the spokesman whom they were wise enough to appoint, Sir Robert Christison, who, in a characteristic speech, set forth the merits of Mr. Stirling as a man whose service had been of the most faithful and valuable kind, making the museum of the University, by his enormous addition to it, one of the finest in the kingdom, and not forgetting his claims as a scientific student of the Salmonidæ and of their diseases. Such claims and such recognition of them are creditable not less to Mr. Stirling than to the University of Edinburgh.

Mr. Shirley Deakin.—There are some good points in our correspondent's letter, but it is too long for publication.

HYOSCYAMINE IN HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—In reference to a letter from Mr. Percival in your issue of July 13th, advocating the trial of hyoscyamine in hydrophobia, I quite agree with him that it might be advisable to try it in such cases; but having had some experience in the use of the drug in different forms of insanity, I would wish to qualify somewhat his statement as to the dose which should be used.

Using pure hyoscyamine obtained from Messrs. Harvey and Reynolds, of Leeds, I have occasionally found 1-8th of a grain produce the most alarming symptoms of poisoning in certain cases; and indeed the effects of the first dose of the drug (the same sample) vary so much in different persons and in different forms of disease that I do not consider it safe to administer more than 1-16th or 1-12th of a grain to a person who has not previously taken the drug. After taking it for a short time, a certain toleration is established, and much larger doses can be safely administered. When given hypodermically, 1-16th of a grain should be the maximum dose for the first administration. Hyoscyamine resembles atropine in that the dose for man should not be regulated by the dose necessary to produce certain effects in animals. Rabbits bear a large dose of hyoscyamine well; but the dose from which a rabbit would recover will kill a human being, and indeed I should be glad to know from Mr. Percival whence he obtained his hyoscyamine, and whether it was pure, as I may mention that a sample of hyoscyamine obtained from another wholesale druggist had comparatively little virtue.

Yours faithfully,

York, July, 1878. ENGLEDUE PRIDEAUX, L.R.C.P. Lond., &c.

FOREIGN DEGREES.

M.D. Foreign.—Our correspondent's letter is too long for publication. We agree in the main with him, provided the Medical Council and the Privy Council exercise proper care in recognising foreign degrees. We have more to gain than lose by such a step, and, even if we had more to lose than gain, it would but consist with the free spirit of England and of science that we should recognise them.

Dr. Greenwood should submit the case to the Censors of the College of Physicians.

IVORY EXOSTOSIS.

To the Editor of THE LANCET.

SIR,—Mr. Field's case of Ivory Exostosis, detailed in your last number, recalls to my memory a case in which a very similar use was made of the American dental engine.

A patient of mine, aged forty, suffered much from facial neuralgia, which was apparently due to a stump of an eye-tooth much decayed. I recommended the removal of the stump, to which she greatly objected. Mr. Williams, surgeon-dentist, of this town, endeavoured to overcome her objections, but without success. He then told her he could grind it out, and this he succeeded in doing in two sittings of two hours' duration. She submitted to this without chloroform, and the operation was a complete success in the removal of the decayed stump, and in the subsequent relief of the pain. To me, looking on, the operation seemed very painful, and I admired the endurance of the patient and the patience of the dentist.

I am, Sir, yours &c.,

Leamington, July 22nd, 1878. JAMES THOMPSON, M.D.

L. N. D.—Patients make a radical mistake in supposing a medical man can prescribe for a *malady*. It is the sufferer who requires treatment, not the disease. It follows, therefore, that to get a prescription, and use it for six months, is not treatment. Every sick person should place himself under the personal supervision of a practitioner, who must watch the case, and prescribe as symptoms arise.

Interested.—Apply to the Secretary of the Medical Benevolent Fund, who will give particulars.

Dr. Pollard's interesting case shall appear shortly.

MEDICAL PRACTICE IN QUEENSLAND.

To the Editor of THE LANCET.

SIR,—Perhaps you or some of your numerous readers can inform me what opening there is for medical practice in Queensland. I refer more especially to the towns. Any information with regard to the climate, cost of living, &c., would be gladly received.—Yours truly,

July 23rd, 1878. M.R.C.S.

*** We believe that both the townships and rural districts are pretty well supplied with medical men.—ED L.

BANK HOLIDAY AND ASSISTANTS.

Epsilon wishes us to say whether Bank Holiday applies to qualified medical assistants. We are afraid that Sir John Lubbock was guilty of a great omission in not taking occasion by the hand to get a holiday on Bank Holiday and Sundays, not for assistants only, but their principals. Till that defect is supplied, we fear that the great old law of attending to the sick will have to rule both on Bank Holidays and "Sabbath" days.

THE TEMPERATURE OF THE HUMAN BODY IN HOT CLIMATES.

To the Editor of THE LANCET.

SIR,—I am much pleased to observe that such an accurate observer as Dr. M. C. Furnell, of the Indian Medical Service, agrees with me in recording that the temperature of the human body in health in the tropics is the same as in temperate climates—viz., 98·4° F. From my own observations in tropical South America, I have found that the axillary temperature is 98·4° F., or a few tenths more or less. On one occasion I took the temperature of a young medical friend of mine in the tropics, and on several successive occasions the thermometer recorded 98·6° F. During my residence in the sub-tropical climate of South Africa I have taken some hundreds of temperatures both of Europeans and of natives belonging to different races—Kafirs, Hottentots, Basutos, &c., and I have invariably found that the temperature was about 98·4° F.

In January of the present year I made some observations on myself and others in New York, when the temperature of the air was 18° F., or 14° below freezing point, and when the snow covered the ground several feet thick, I found the average axillary temperature to be 98·3° F. I have thus made observations in tropical, sub-tropical, and cold climates, and feel satisfied that the temperature of the body in health is the same, irrespective of race, latitude, or climatic conditions.

I am, Sir, yours &c.,

July 22nd, 1878. J. G. THORNLEY, M.D., F.G.S.

THE ANOTHER.

DR. TIBBITS has started a new special hospital in Welbeck-street, to be called "The West London Hospital for the Paralysed and Epileptic." There is another physician in addition to the one named, and a consulting staff of seven persons. The prayer used by the honorary chaplain at the inaugural festival has been printed, and is being widely circulated, and we gather that at the opening ceremony there were present three officers of the hospital, two members of the committee, nine ladies, and others (at least we suppose that "&c. &c." means somebody).

Mr. H. Edward.—Better write to the Registrar of the Medical Council.

THE DEATH OF THE QUEEN OF SPAIN.

To the Editor of THE LANCET.

SIR,—Seeing a letter from Mr. Walter Fergus in THE LANCET of the 6th inst., and previous to that a letter in *The Times*, attributing the death of the Queen of Spain to typhoid fever, if you will kindly permit me I will state a few particulars relating thereto, leaving you and your readers to form their own opinions and diagnosis of the complaint, and the cause of her lamentable death.

The bulletins referring to her sickness (which are now before me) may be divided into three sets. The first appeared in the *Gaceta*, the Government organ, on the 19th and 20th June, setting forth that H.M. Doña Mercédes was complaining of slight fever of the intermittent type, accompanied by vomiting, anorexia, &c., the fever giving way to the remedies applied, and that the above symptoms indicated pregnancy. The second set stated that the vomitings continued, and that intestinal hæmorrhage had set in. On the 22nd a medical consultation was held, consisting of the ordinary staff of the Palace, with three army surgeons and three civil medicos. According to Spanish medical etiquette, all these agree, and the result is, giving her disease the incomprehensible title of "fiebre escencial ataxica." What disease this is I leave you and your readers to puzzle out and explain. The third set put forth that the vomiting was relieved, but the fever had returned in force, and intestinal hæmorrhage continued on the increase. Another consultation of the same "medicos y cirurganos," with the same result, only changing the name or title of the complaint; and the final bulletin comes forth on the 26th that H.M. Doña Mercédes at 12.15 noon died from "fiebre gastrica nerviosa"! I also leave it to the superior knowledge of you and your readers to decipher what sort of disease this is. The style and class of the above incomprehensible bulletins remind me of those sent forth when General Prim was assassinated. All the world knew that he was traitorously and cruelly murdered by his political enemies, and hurried to death by being overcrowded by his friends and shockingly maltreated by his surgeons; nevertheless, the final bulletin came forth, "El General Prim ha muerto de *un ataque cerebral*"!

I got so far with this letter to you, intending to dispatch it per mail of yesterday, when the post brought me my LANCET of the 13th inst., and in skimming hurriedly over it my eye fell upon the sensible and shrewd letter of "Inquirer," referring to the above subject, who seems to understand something of the degraded state of the practice of medicine in Spain. I have taken the trouble to analyse every bulletin most carefully, and to make inquiries from every source, medical and social, among the Spaniards to know of what disease the lamented Queen died. The analyses of the bulletins give me a most unfavourable impression both as to the cause of her fatal sickness and her painfully agonising, hurried death; while my inquiries of Spanish friends and patients as to the *cause* of her death have, without exception, been replied to by a shrug of the shoulders and "quien save," or "I don't know—it is very mysterious," &c. I need not trouble you with the various rumours in reference to the subject, and can only repeat what you, Mr. Editor, append in your foot-note to "Inquirer's" letter: "The case is by no means satisfactory from a medical point of view," and I would add nor from a political or social point of view. I have not the slightest hesitation in stating, had such an illness overtaken any subject of our beloved Queen in Great Britain, terminating in the same *peculiar* death, that a coroner's inquest would have been held on the body. From the nature of the Madrid soil and climate, from the excellent natural fall for drainage, and, what is most important of all, from the most perfect and complete isolation of our water-supply and drainage from each other (indeed, in their distribution they have not a shadow of relation to each other), I can affirm, without the slightest stretch of language, that typhoid or enteric fever, as well as diphtheria, are the very rarest of zymotic diseases that present themselves in Madrid. I have been engaged in most active practice for upwards of eight years in this city, and my experience has been amongst every class in connexion with all their sickness; yet I have only seen and attended two cases of enteric fever, and they were both countrymen and isolated cases. One got poisoned by long self-imposed exposure to sewer-gas from an old drain, which was unexpectedly broken into, and the other was the result of taking a large draught of water from the boiler of an old steam-engine that had been idle for months. I have never seen a single case of diphtheria. The Royal Palace, where Doña Mercédes lived and died, is exquisitely situated for health, water-supply the finest and purest in the world, drainage excellent, and no other being has been affected with the said typhoid, so that I cannot believe she had enteric or any other zymotic disease. It is rather a strange thing the secret police should have been quadrupled immediately after, or rather before, her death, and several people taken up and sent to prison for stating their opinions about the cause of the Queen's sad end. Your correspondent, Mr. Fergus, is right in supposing that her death was cruelly hastened by the fussy overcrowding her death-bed by her so-called spiritual and medical advisers, and a host of intrusive political friends (enemies!).

By this same post I send you an illustrative paper comprising the above remarks. Her father, the Duke de Montpensier, was desirous for an autopsy, but the King refused his consent; while the latter proposed that his Queen should be embalmed, but her father refused this on the ground that it was not the custom of his house to embalm any member of the family. Yours faithfully,

Madrid, July 16th, 1878. WM. JELLY, F.R.C.P. Lond., &c.

P.S.—I forgot to state that the Spanish medico-technical scape-goat for most of the deaths attributable to zymotic fevers and a large number of other diseases is "fiebre tifodea"; in fact, from acute and chronic poisoning to gout.

L.R.C.P.—If the degree is approved by the Medical Council, it may be registered.

Health P. H.—Our correspondent should consult his own doctor, who will advise him.

A. F. P.—We must decline.

Mr. A. Thomson should consult a practitioner.

SANITARY INSPECTION OF HOUSES.

To the Editor of THE LANCET.

SIR,—Your annotation on the Voluntary Sanitary Inspection of Edinburgh, in your issue of July 13th, page 59, should make London house occupiers think. The knowledge of the existence of this Voluntary Association should be widely spread. I write from my own personal experience as one who, a stranger to London houses, has recently taken a good house in a good situation for a year. The owner informed me the house had been occupied for eighteen years, and never a smell heard of, that the sink-pipes had recently been all looked to, that the soil-pipe was in excellent order, that the traps were all in good working condition, and that all had recently been overhauled. After a few weeks' occupation I find out that the soil-pipe is of iron, that it has no ventilation which can be found out, that smell comes into windows at night, distinct sewer smell, the origin of which cannot be discovered without opening up every pipe and drain in the place; that the drains of the sinks smell in this warm weather, all of which is, however, dissipated by solution of Cooper's salts being sent down them, and that the gurgling of air is heard when the handle of the w.c. is lifted up. I, a stranger, and ignorant of London houses, have found out so much. How am I to find a remedy? I cannot go to the expense of opening out the drains and pipes; indeed the landlady will not hear of it. There must be many temporary occupiers of houses in the same position. Can you tell me what remedy to apply, and what official to apply to?

Your obedient servant,

July 18th, 1878. AN OLD SUBSCRIBER.

"ENGLAND'S DRINKS THE CAUSE OF INTEMPERANCE IN HER PEOPLE."

To the Editor of THE LANCET.

SIR,—A very useful letter, under the above heading, appeared in your issue of the 29th ult. The subject of agreeable and wholesome drinks to be used in place of alcoholic ones is a most important one, and one an advance in which might do more to check intemperance than prohibitive legislation. Once it became a usual thing to "treat" in non-intoxicating liquors, a great source of intemperance would be removed. Now, as one practising amongst the working classes in a manufacturing town, I have often wished to know pleasant and cheap non-alcoholic drinks to recommend. I should feel grateful if any of your readers would give me information on this point. Besides cheapness, ease of getting materials and combining them is necessary. I should prefer those that can be used without aerated water, owing to the expense of a gazogene.

I am, Sir, yours truly,

July 3rd, 1878. DECCAM.